620
XFWS-A 620 1-66(1970)
U.S. Fish Wildl. Serv.
Spec. Sci. Rep. Fish.

P. J. STRUHSAKER

The Trade Wind Zone Oceanography Pilot Study Part IX: The Sea-Level Wind Field and Wind Stress Values July 1963 to June 1965

By Gunter R. Seckel

SPECIAL SCIENTIFIC REPORT–FISHERIES No. 620

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES

UNITED STATES DEPARTMENT OF THE INTERIOR
Walter J. Hickel, *Secretary*
Leslie L. Glasgow, *Assistant Secretary*
for Fish and Wildlife, Parks, and Marine Resources
Charles H. Meacham, *Commissioner*, U.S. FISH AND WILDLIFE SERVICE
Philip M. Roedel, *Director*, BUREAU OF COMMERCIAL FISHERIES

The Trade Wind Zone Oceanography Pilot Study
Part IX: The Sea-Level Wind Field and Wind Stress Values July 1963 to June 1965

By

GUNTER R. SECKEL

United States Fish and Wildlife Service
Special Scientific Report--Fisheries No. 620

Washington, D. C.
June 1970

CONTENTS

	Page
Introduction	1
Sources of data	2
Processing of data	2
Computations	3
Evaluation of results	4
Inadequacy in the distribution and quality of data	4
Comparisons with other results in the North Pacific	5
Interseason and interyear comparisons	7
Conclusion	9
Acknowledgments	10
Literature cited	10
Appendix table A	11
Appendix table B	54

FIGURES

1. The regions of oceanographic and meteorological observations for the Trade Wind Zone Oceanography Pilot Study — 2
2. Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 2° N., long. 157° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948) — 6
3. Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 17° N., long. 152° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948) — 6
4. Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 32° N., long. 167° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948) — 7
5. Zonal component of wind stress, lat. 20° N., long. 150° W., January 1956 to December 1957, derived from meridional Ekman transports computed by Fofonoff — 9

Digitized by the Internet Archive
in 2025

https://archive.org/details/noaa-technical-report-nmfs-ssrf_1970-06_620_1

The Trade Wind Zone Oceanography Pilot Study
Part IX: The Sea-Level Wind Field and Wind Stress Values
July 1963 to June 1965

By

GUNTER R. SECKEL, Oceanographer

Bureau of Commercial Fisheries Biological Laboratory
Honolulu, Hawaii 96812

ABSTRACT

Wind observations and derived wind stresses are summarized in 5° square units of the area lat. 0° to 35° N., long. 130° to 170° W., for each month. The results complement time-sequence oceanographic observations of the Trade Wind Zone Oceanography Pilot Study in the area lat. 10° to 26° N., long. 148° to 157° W., February 1964 to June 1965. The sources and processing of wind observations, and the computations to obtain the zonal and meridional components of the wind velocity, the square of the wind speed, and the zonal and meridional components of the wind stress are described. The results are consistent with monthly wind stresses computed from long-term mean winds over the North Pacific. Despite inadequacies in the distribution and quality of data, the wind and wind stress summaries are adequate for interseason and interyear comparisons.

INTRODUCTION

This report contains monthly summaries of sea-level wind observations and the derived wind stresses at the sea surface in the area bounded by lat. 0° and 35° N. and long. 130° and 170° W., July 1963 to June 1965. The wind data and wind stress values, in addition to other meteorological properties and heat exchange processes that were published previously (Seckel, 1970), complement the TWZO (Trade Wind Zone Oceanography) Pilot Study oceanographic data (Charnell, Au, and Seckel, 1967a, 1967b, 1967c, 1967d, 1967e, 1967f).

The TWZO Pilot Study was designed to further an understanding of the mechanisms that change the distribution of sea-water properties and water masses in the North Pacific trade wind zone (Seckel, 1968). The meteorological processes are an essential part of these mechanisms; e.g., the heat exchange processes affect the heat budget and the wind stress affects the momentum budget of the ocean.

The areas of the TWZO oceanographic and meteorological observations are outlined in figure 1. The oceanographic field work took place from February 1964 through June 1965 in the area between lat. 10° to 26° N. and long. 148° to 157° W. Oceanographic stations in a fixed grid were occupied at monthly intervals.

Oceanographic conditions that were observed are intimately related to the behavior of the trade wind system. The area of interest, therefore, encompasses the region of strongest trade winds, which is located between the North Pacific high- and the equatorial low-pressure regions. Because the results reported here begin in July 1963, they antecede and cover the oceanographic study period.

The wind data and wind stresses for every month of the 2-year study period are presented in two tables: Table A contains means of the observed and derived values per 5° square, and table B contains interpolated values based on smoothed charts.

The sources of data, methods of processing and computation, and an evaluation of the results, are presented below.

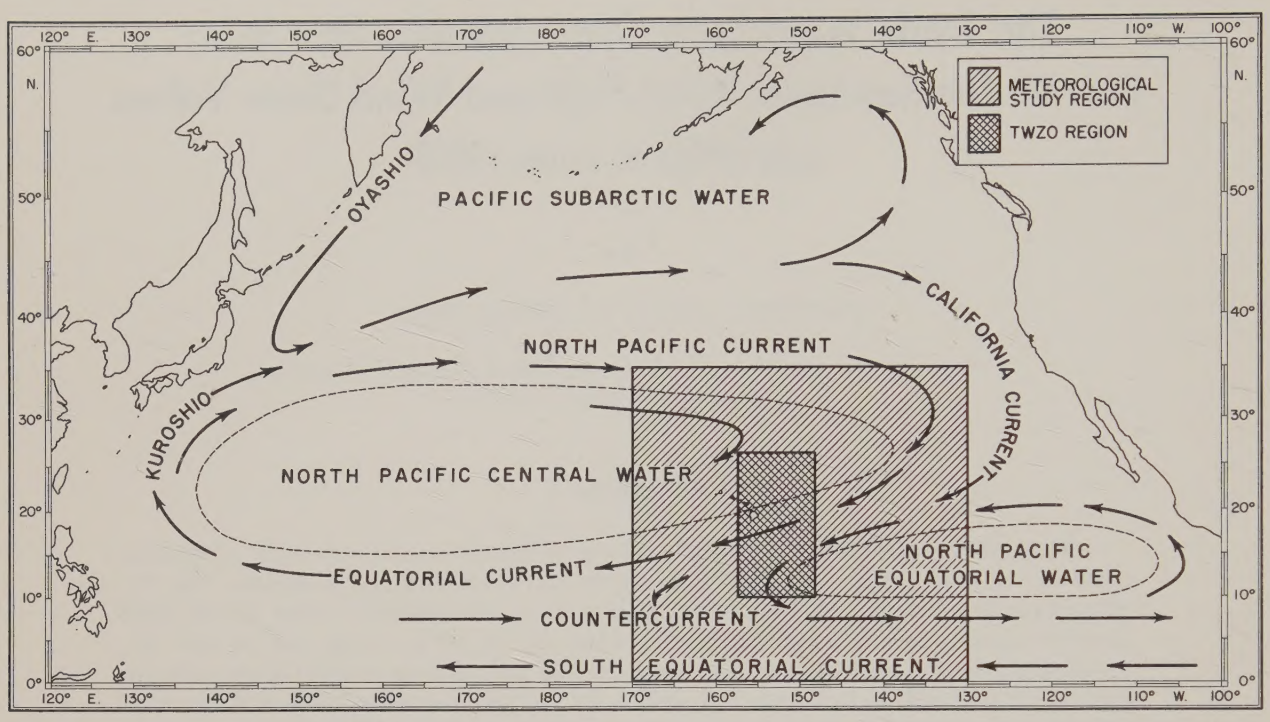

Figure 1.--The regions of oceanographic and meteorological observations for the Trade Wind Zone Oceanography Pilot Study.

SOURCES OF DATA

About 80,000 sets of meteorological observations were used in the preparation of this report. Their principal source was the surface marine observations Card Deck No. 128 of the National Weather Records Center. To those data were added the meteorological observations recorded on board the BCF (Bureau of Commercial Fisheries) research vessels Townsend Cromwell and Charles H. Gilbert that were not already a part of the surface marine deck.

Meteorological data for the central North Pacific south of Hawaii are scarce. It is therefore valuable to add to the surface marine observations those made on Johnston Island (lat. 16°45' N., long. 169°30' W.) and on Christmas Island (lat. 1°51' N., long. 157°23' W.). Since both islands are atolls, the early morning meteorological conditions would approximate those over the adjacent ocean. Sea-level observations for Johnston Island were obtained from the National Weather Records Center, Card Deck No. 144. At Christmas Island, meteorological observations were made three times daily for BCF. The 1800 G.m.t. synoptic meteorological observations from the two islands (0800 local time, Christmas Island, and 0700 local time, Johnston Island) have been combined with the surface marine data.

PROCESSING OF DATA

The meteorological data were initially sorted chronologically by day and by 1° square units of area. When more than one set of observations occurred in a 1° square per day, the meteorological properties, including the wind speeds and the zonal and meridional components of the wind velocity, were averaged. Consequently, only one set of meteorological observations can occur per day in any 1° square.

Quality control over the large number of data proved to be a major task. I inspected an initial listing of the data and eliminated obviously erroneous values, determined by comparison with values on record for the same geographic region and within a few days.

At the time of the initial sorting, I also computed derived properties and heat exchange processes. Thus the magnetic tape, which is kept on file to permit a more detailed analysis

than is presented here, also contains in chronological order by day and by 1° square the wind speed and direction, the zonal and meridional components of the wind velocity, the square of the wind speed, and the zonal and meridional components of the wind stress.

I originally planned to summarize the meteorological data for periods of, possibly, 5 days and then, by summation, obtain values for the monthly sea-air interaction processes. The spatial and temporal distribution of marine observations proved inadequate to permit this procedure, however, so the traditional climatic approach had to be used.

The wind properties on the data tape were, therefore, summarized by 5° squares and by months and are presented in table A. The summaries for each property contain the mean value, the highest and lowest values observed, and the standard deviation if there were more than four observations. The number of observations and the mean location of observations are also given.

Smoothed charts of the zonal and meridional components of the wind velocity, the square of of the wind speed, and the zonal and meridional components of the wind stress were obtained by hand-contouring the summarized data plotted at the mean location of the observations. In turn, the smoothed charts were used to obtain interpolated values at the center of each 5° square that are presented in table B. In this table the properties are listed in geographic format to facilitate contouring.

When table B is used in combination with table A, it is possible to judge the reliability of the results in any area and month covered by this report.

COMPUTATIONS

The wind stress is the only derived property listed in tables A and B whose calculation needs discussion. All other properties listed are simply mean values of vector components from which the resultant winds and wind stresses can readily be obtained. The monthly values of the square of the wind speed are based on the squared value of each wind speed observation.

Malkus (1962), in an excellent summary of the significance of wind and wind stress in large-scale, sea-air interactions, reviewed the method of computation of the wind stress and the limitations of the stress estimates so obtained. The formula for the magnitude of the wind stress at the sea surface,

$$\tau = \rho C_D W^2,$$

is particularly applicable when surface-ship wind measurements are used. In the formula, ρ is the density of the air, W the wind speed, and C_D the nondimensional drag coefficient.

The drag coefficient is the uncertain term in the formula. First, C_D varies widely depending on the stability of the air (Malkus, 1962; also see a theoretical analysis of the air-sea exchange coefficients as a function of stability by Deardorff, 1968). Secondly, the dependence of C_D on the wind speed has not been resolved. For example, Wu (1969) suggested a coefficient that varies with wind speed, but Ruggles (1969) proposed a constant for winds from 2 to 10 m. sec.$^{-1}$, $C_D = 1.6 \times 10^{-3}$.

Computation of large-scale, sea-air interaction processes by different workers reflect these uncertainties. In calculation of evaporation rates a constant drag coefficient has generally been used (Malkus, 1962). In the computation of the wind stress, different values of the drag coefficient have been used for low ($\leq$6.7 m. sec.$^{-1}$) and high ($>$6.7 m. sec.$^{-1}$) wind speeds (Malkus, 1962; Reid, 1948).

In this paper the choice of the drag coefficient for the calculation of the wind stress was based on three considerations: (1) In the study region neutral stability at the height of marine weather measurements can be assumed; (2) relative changes in the wind stress from month to month and season to season, rather than absolute magnitudes of wind stress, were the main interest of the TWZO Pilot Study; and (3) because the wind stresses computed at the Scripps Institution of Oceanography (1948) and by Hidaka (1958), based on a drag coefficient with different values for low and high wind speeds, have been widely applied, the use of drag coefficients giving comparable results is valuable.

The drag coefficient for neutral stability, which varies with wind speed given by Malkus (1962: fig. 6, p. 110), satisfies the considerations above and has been used to calculate the wind stresses in this paper. The equation

$$C_D = \left[\frac{\arctan (W-8)}{1.96} + 1.6\right] 10^{-3},$$

with the wind speed in meters per second, approximates the values given by Malkus and facilitates computation.

The computer program to calculate the zonal and meridional components of the wind stress

is based on the formulas

$$\tau_x = \rho C_D W^2 \sin\theta \text{ and } \tau_y = \rho C_D W^2 \cos\theta,$$

respectively. θ is the direction of the wind vector; the zonal component is positive eastward, and the meridional component is positive northward.

The zonal (W_x) and meridional (W_y) components of the wind vectors were calculated during the initial sorting of the meteorological data so that recalculation of the trigonometric functions is unnecessary. By substitution of $W_x/W = \sin\theta$ and $W_y/W = \cos\theta$, the above formulas become

$$\tau_x = \rho C_D W W_x \text{ and}$$

$$\tau_y = \rho C_D W W_y.$$

The density of the air has been assumed to be constant at $\rho = 1.22 \times 10^{-3}$ g. cm.$^{-3}$. The stress is expressed in dynes cm.$^{-2}$ when the wind speed is given in cm. sec.$^{-1}$.

EVALUATION OF RESULTS

The uncertainties in the estimation of large-scale, sea-air heat exchange processes (discussed by Seckel, 1970) are due to (1) inadequacies in the distribution and quality of the data, (2) the methods of processing that must be used because of inadequate spatial and temporal distribution of observations, and (3) uncertainties in the empirical formulas. These factors also affect the sea-air exchange process--the wind stress--which is the subject of this paper.

The derivation of formulas for the computation of wind stress is the subject of active research and is thoroughly treated in the literature cited here and elsewhere. The method of processing to be used must be chosen with care because the wind stress is a vector whose magnitude is a product of the square of the wind speed and a drag coefficient that varies with wind speed. Malkus (1962) examined the methods of computation to be used in the light of these factors. Here the evaluation will be concerned with the data inadequacies, comparisons with other results in the North Pacific, and with interseason and interyear comparisons. Because the wind stress is of principal interest in the TWZO Pilot Study, only this property is compared. The results of the comparisons, however, also apply qualitatively to the components of the wind vectors.

Inadequacy in the Distribution and Quality of Data

South of lat. 15° N. the number of observations per month was small and in some 5° squares observations were lacking (table A). To complete contouring of the smoothed charts, liberties were taken when interpolation or occasionally extrapolation was necessary. For these latitudes the results presented in table B must therefore be regarded with caution.

North of lat. 15° N. sampling was more adequate, particularly in the latitudes from Hawaii northward, which contain the shipping lanes from North America to the Far East and to Hawaii. Reliable results in table B are those from lat. 32° N., long. 142° W., which, in addition to a large number of observations from merchant vessels, contain those from the U.S. Coast Guard Weather Station November. At Weather Station November, meteorological observations are made by trained observers from the U.S. Weather Bureau.

Results of table B at lat. 2° N., long. 157° W. and at lat. 17° N., long. 167° W. should also be reliable because they include the daily observations from Christmas and Johnston Islands. There is evidence, however, that wind speeds measured on atolls may be below those over the adjacent ocean. Ramage (MS.[1]) made reference to wind measurements on Palmyra Island (lat. 5°52' N., long. 162°6' W.) an atoll with a maximum elevation of 3 m. above sea level. He showed that wind speeds depended on location of measurement, and at some sites were as much as 38 percent below those measured at the exposed windward side of the atoll.

The magnitude of the island effect on the wind speeds measured at Christmas and Johnston Islands is not known. The interpolated values of table B also depend on the observations in adjacent 5° squares that would tend to reduce the island effect. At lat. 2° N., long. 157° W. (table B) the 2-year mean of the zonal component of the wind velocity is 4.1 m. sec.$^{-1}$. At the same latitude but long. 152° and 162° W. the 2-year means are 4.6 m. sec.$^{-1}$ and 4.9 m. sec.$^{-1}$, respectively. The lower value at lat. 2° N., long. 157° W. may be due to a Christmas Island bias. At lat. 17° N., long. 167° W., no systematic bias is apparent.

[1]Ramage, C. MS. Monsoon meteorology. Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii 96822.

In general, because the wind stress is a vector whose magnitude depends on the square of the wind speed and a variable drag coefficient, frequent sampling of the wind velocity--possibly more than once per day--is required to obtain reliable measures of the monthly wind stress. The steadiness of the trades (Malkus, 1962) reduces this requirement. Nevertheless, relatively large variations in wind speed and direction may occur in timespans of a few days. Thus, south of lat. 15° N. the interpolated winds and wind stresses of table B are heavily biased by the small number of observations which, although they may be based on correct measurements, do not necessarily reflect the true monthly mean value.

The choice in the preparation of table B was either to leave the questionable areas blank, particularly those in the southeastern part of the study area, or to present values based on the limited observations. The latter course was chosen because it draws attention to the high winds that may occur, especially in the southeastern part of the study area. (See the climatic atlas by McDonald, 1938.)

Inadequacies in the quality of marine meteorological observations are well known. Visual inspection of the data used in this report again drew attention to the primary factors that tend to reduce the quality of data. Errors in marine surface weather data are not so much due to incorrect reading of instruments and recording of observations as to improper placement and calibration of the instruments, improper technique of measurement, and errors in data reduction at sea.

Errors in data reduction are a primary cause for wrong wind speeds and directions. For example, visual inspection revealed that an observation showing a westerly wind may appear in areas with a large number of observations showing an easterly wind. A reversal in wind direction can easily occur because of an error in the vector addition of the measured apparent wind and the speed and direction of the ship. Incorrect vector addition also results in wrong wind speeds and directions, which are not so readily detected as a 180° error in wind direction.

Comparisons with Other Results in the North Pacific

Evaluation of the results presented in table B includes comparisons with other results obtained in the North Pacific. Most suitable for comparison are the tabulations of mean wind stresses over the North Pacific prepared under the direction of J. F. T. Saur, Jr. and John D. Cochrane (Scripps Institution of Oceanography, 1948). These results, given in 5° square units of area for each month, were based on summary wind data contained in the U.S. Hydrographic Office Pilot Charts. The mean wind speed in integral Beaufort numbers and the frequency of wind for each of the 16 points of the compass are presented in the form of a wind rose. Reid (1948) described the method used to obtain the resultant wind stresses. Malkus (1962) has demonstrated that the results obtained by the "Scripps Pacific Method" are comparable with those obtained by direct summation in which the drag coefficient is variable. The latter is the method of calculation in this paper.

The wind stresses of table B at lat. 2° N., long. 157° W. (equatorial zone), at lat. 17° N., long. 152° W. (trade wind zone), and at lat. 32° N., long. 167° W. (in the zone of the North Pacific pressure ridge), together with the SIO (Scripps Institution of Oceanography) results for the same locations are shown in figures 2, 3, and 4, respectively.

For each of the examples, except τ_x in the trade wind zone, the mean annual values of the 2 study years and of the SIO "climatic year" are in good agreement. Values of individual months show relatively large departures from the values based on climatic data, particularly at lat. 17° and 32° N. Large fluctuations of the wind stresses from month to month are to be expected at lat. 32° N., where they reflect sensitivity to changes in the location of the North Pacific high-pressure region.

In the trade wind zone, the large month-to-month and year-to-year variations of τ_x were unexpected, particularly in view of the small variations of the monthly stress values of the climatic year. Closer inspection of figure 3 reveals that magnitudes of τ_x during the study period were 1 year out of phase: absolute magnitudes were low during summer and autumn 1963 and high during summer and autumn 1964; conversely, absolute magnitudes were high during winter and spring 1964, but low 1 year later. If only the 2 years 1963 to 1965 are used to obtain an average value for each month, the extreme range in τ_x is reduced from about 2 to 0.85 dynes $cm.^{-2}$. Thus, a flat climatic curve, resulting from large year-to-year fluctuations

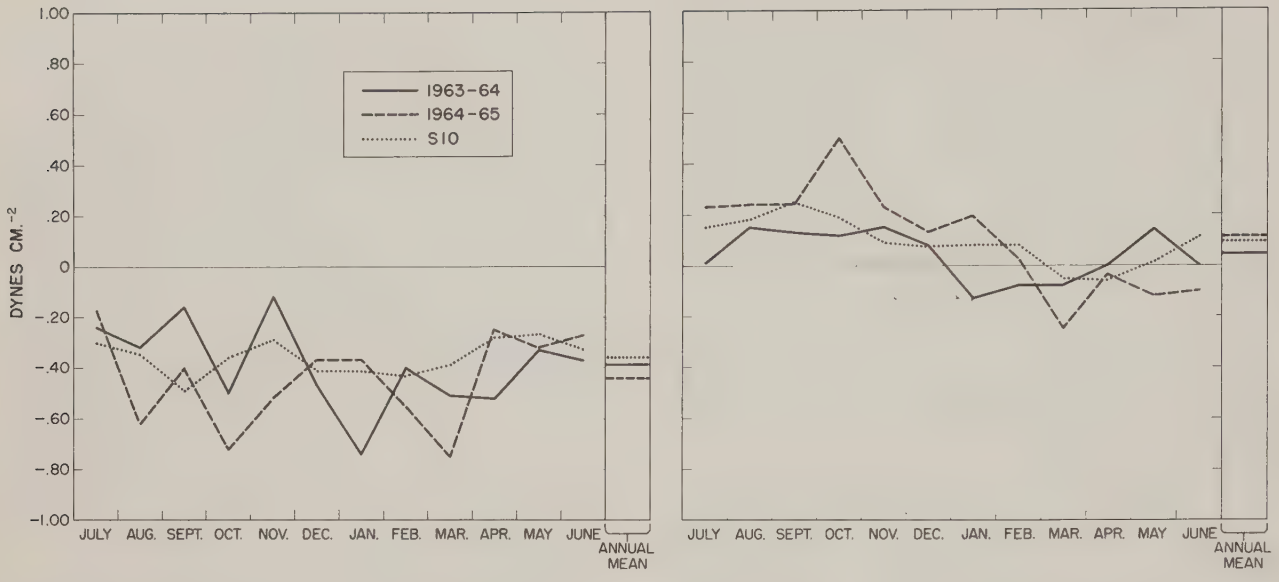

Figure 2.--Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 2° N., long. 157° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948).

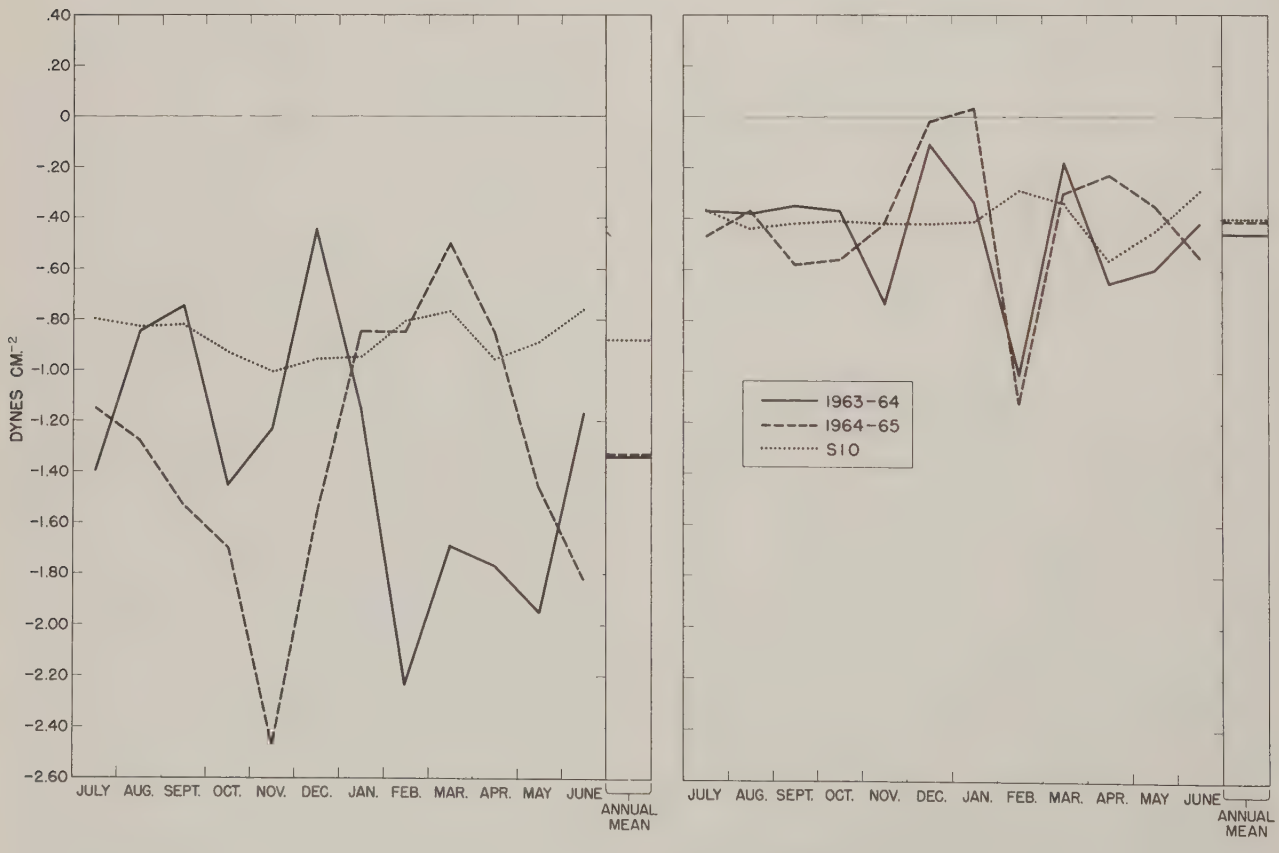

Figure 3.--Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 17° N., long. 152° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948).

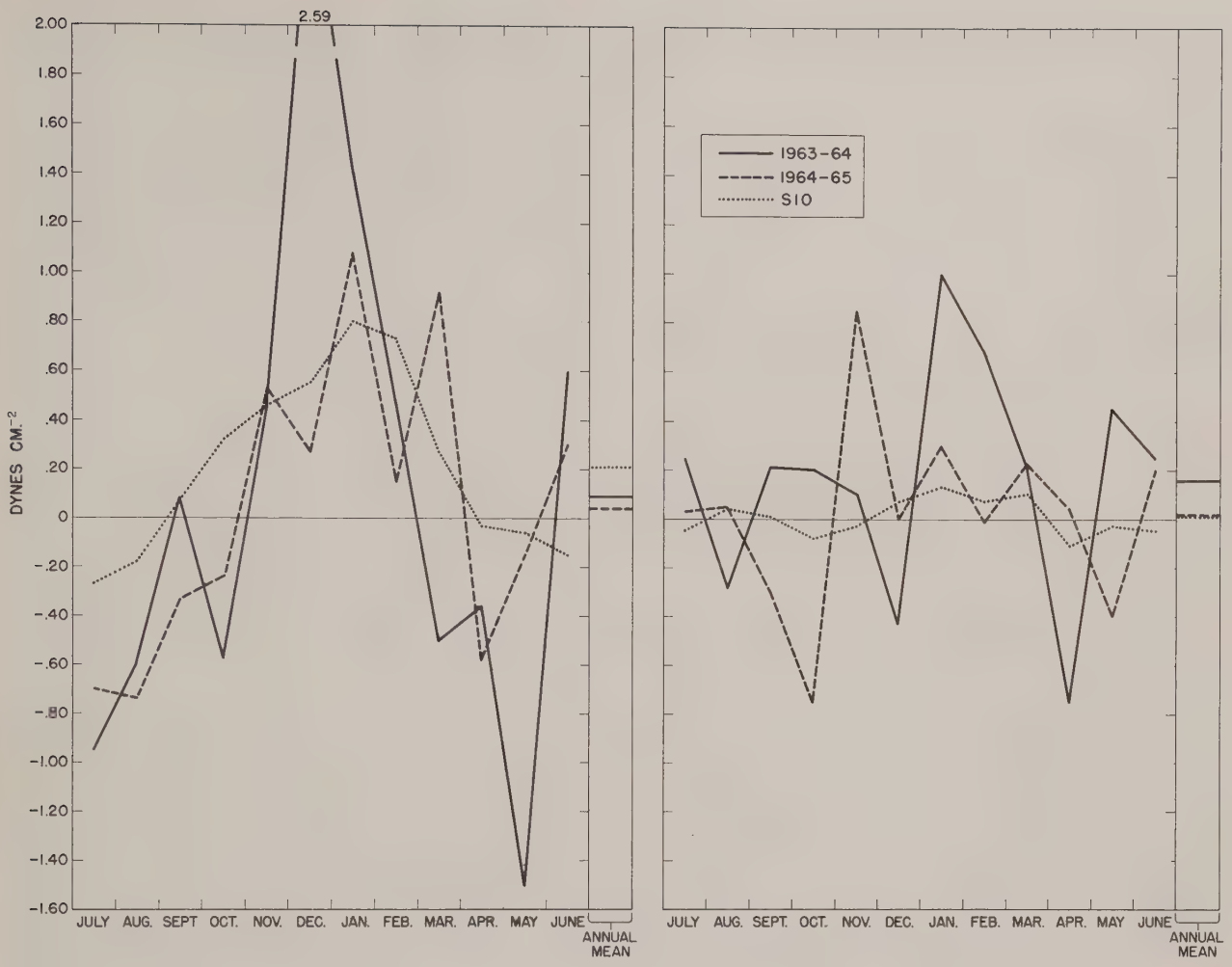

Figure 4.--Zonal component (τ_x) left panel, and meridional component (τ_y) right panel, of the wind stress at lat. 32° N., long. 167° W., July 1963 to June 1965, from table B, and climatic values from Scripps Institution of Oceanography (1948).

without a dominant seasonal trend, is consistent with the results obtained from July 1963 to June 1965.

The discrepancy of the mean annual values of τ_x in the trade wind zone is in marked contrast to the good agreement in the other examples. Also, the comparisons made by Malkus (1962) lead to the conclusion that the large difference of 0.46 dyne cm.$^{-2}$ in annual means is due to real departures during the 2-year study period from the long-term mean conditions rather than to the computational differences used at SIO and in this paper.

Interseason and Interyear Comparisons

It is clear from the preceding section that the month-to-month changes of climatic means do not necessarily reflect the changes to be expected during any individual year. The mechanisms producing changes in properties of the ocean, such as evaporation or wind stress, may also show much greater season-to-season or year-to-year variations than would be expected from climatic mean values. The changes in the heat of evaporation and the net heat exchange across the sea surface that occurred during July 1963 to June 1965 have been illustrated by Seckel (1970). Similar changes also occurred in the wind stress.

In the equatorial example (fig. 2), τ_x shows no clear seasonal trend in either of the 2 study years or in the SIO climatic year. Although the absolute magnitude of the zonal stress component is small, relative year-to-year changes

may be large. For example, from August to November 1963 the average τ_x was -0.28 dyne cm.$^{-2}$ and for the same months of 1964 it was -0.56 dyne cm.$^{-2}$.

Bjerknes (1969) drew attention to the large differences in central Pacific equatorial temperatures during autumn 1963, winter and autumn 1964, and winter 1965 and discussed the significance of the equatorial temperature anomalies in relation to the atmospheric circulation. The temperature at lat. 2° N., long. 157° W. for December was 27.1° C. in 1963 and 25.3° C. in 1964 (Seckel, 1970). How much of the temperature difference can be attributed to the difference in equatorial divergence as a result of the changes in wind stress has not been determined. The lower temperature in December 1964, however, is consistent with the increase in magnitude of τ_x during August to November 1964.

A consistent seasonal pattern of change in τ_y is apparent from figure 2 for both study years and for the SIO climatic year and reflects the seasonal shift in the latitude of the intertropical wind convergence. Again, year-to-year changes were relatively large. From July 1963 to February 1964 the average τ_y was 0.05 dyne cm.$^{-2}$, and for the same months of the following year it was 0.22 dyne cm.$^{-2}$. An increase in the meridional stress resulting from a northward shift of the intertropical convergence should be accompanied by a decrease in the vapor pressure of the air. For lat. 2° N., long. 157° W. the average vapor pressure from July 1963 to February 1964 was 28.6 mb. and for the same months 1 year later it was 26.3 mb. Thus, despite the small magnitudes of τ_y, the year-to-year change was consistent with the change of the independently measured vapor pressure.

The large changes in the zonal wind stress component in the trade wind zone example, combined with a phase shift of about 1 year, have been mentioned in the previous section. A dominant seasonal change during the 2 study years or the SIO climatic year is not apparent from figure 3. Year-to-year changes, however, are pronounced. The mean value of τ_x for August to December was -0.95 in 1963 and -1.71 dynes cm.$^{-2}$ in 1964. The mean value for January to March was -1.76 in 1964 and -0.90 dynes cm.$^{-2}$ in 1965. The results during winter and spring 1964 reflect high trade wind velocities and correspond with high autumn 1963, winter 1964 equatorial temperatures as described by Bjerknes (1969).

To investigate whether the variations in τ_x during the 2 study years were anomalous, I used transport computations for the North Pacific Ocean of the Pacific Oceanographic Group, Nanaimo, Canada. The zonal and meridional components of Ekman transport were calculated from monthly mean sea-level pressure charts. From the components of Ekman transport the components of wind stress can be calculated (wind stresses were not given in the tabulations). Because of the limits of the sea-level pressure charts for the Northern Hemisphere, the results of the transport computations do not extend southward to the area of the trade wind zone example considered here. The zonal component of wind stress for each month of 1956 and 1957 was therefore computed at lat. 20° N., long. 150° W. (Fofonoff, 1960a, 1960b[2]) and presented in figure 5. Fofonoff discussed the limitations of the method to compute Ekman transports. The computations are also based on data primarily from an area north of the maximum trades so that a seasonal trend in the wind stresses is apparent in figure 5. For the intended comparison, however, note that the absolute magnitude of the wind stress was high in February and March in 1956 but low 1 year later. In November and December the magnitude was low in 1956, but high in the following year. Although the regularity of high and low τ_x values in alternating years is not known, the results of the 2 study years, 1963 to 1965, are not anomalous in light of Fofonoff's transport computations.

A seasonal trend in τ_y is not apparent from figure 3, except that during both study years low magnitudes during December and January were followed by high magnitudes during February. These relatively large changes are not reflected by the SIO climatic values but are qualitatively consistent with monthly mean sea-level pressure distributions.[3]

---

[2]Fofonoff, N. P. 1960a. Transport computations for the North Pacific Ocean, 1956. Fish. Res. Bd. Can., Manuscript Rep. Ser. (Oceanogr. Limnol.) 78, 9 pp.

1960b. Transport computations for the North Pacific Ocean, 1957. Fish. Res. Bd. Can., Manuscript Rep. Ser. (Oceanogr. Limnol.) 79, 9 pp.

[3]Northern Hemisphere charts of mean sea-level atmospheric pressure, Extended Forecast Division, National Meteorological Center, Environmental Science Services Administration.

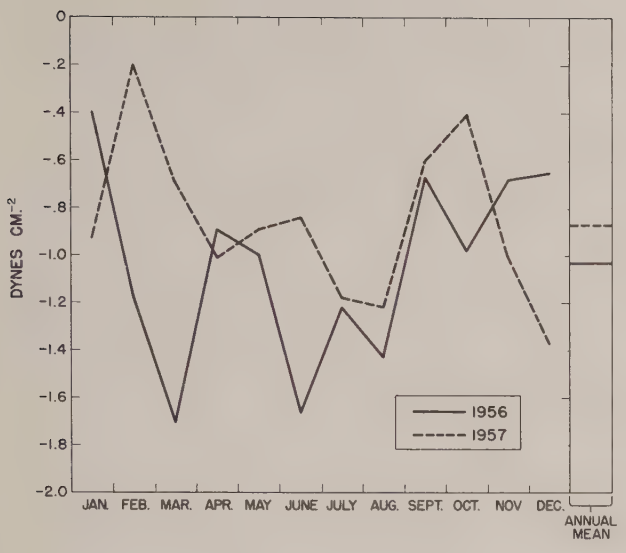

Figure 5.--Zonal component of wind stress, lat. 20° N., long. 150° W., January 1956 to December 1957, derived from meridional Ekman transports computed by Fofonoff.

In the example from the northern zone (fig. 4), the pronounced seasonal changes in τ_x are consistent with the shifts in latitude of the North Pacific pressure ridge. Most striking are the extreme values of December 1963 and May 1964. The average of the τ_x for December 1963 to January 1964 is 2.00 dynes cm.$^{-2}$ and for December 1964 to January 1965 is 0.68 dyne cm.$^{-2}$. The large differences are again consistent with the statements by Bjerknes (1969) relating high equatorial temperatures, autumn 1963 and winter 1964, with the strong westerlies in midlatitudes.

The average value of τ_x for March to May 1964 is -0.79 dyne cm.$^{-2}$ and for March to May 1965 is 0.06 dyne cm.$^{-2}$. Qualitatively, the large year-to-year differences during both the autumn and spring seasons are consistent with monthly mean sea-level pressure distributions.[3]

The large fluctuations of τ_y (fig. 4) also reflect changes in the North Pacific high-pressure distribution associated with frequent changes in the direction of the meridional component of the wind. Seasonally, from late autumn to early spring, the prevailing wind has a southerly component. During the study period the average τ_y for January to February 1964 was 0.84 dyne cm.$^{-2}$ and for the same month in 1965, 0.14 dyne cm.$^{-2}$. With the vapor pressure of the air increasing southward it is reasonable to expect higher vapor pressures of the air during winds with a stronger component from the south. The average vapor pressure for the same 2 months was 16.2 mb. in 1964 and 13.0 mb. in 1965 (Seckel, 1970). This example, like that in the equatorial zone, confirms the consistency of the wind data with the independently measured vapor pressure.

CONCLUSION

The foregoing evaluations have shown that despite the limitations of the marine surface meteorological observations, meaningful measures of the month-to-month and year-to-year changes in the wind stress have been obtained for a large portion of the North Pacific trade wind region. The results presented in table B, therefore, satisfy the needs of the TWZO investigation.

Beyond this application, the need for monthly measures of the wind stress will continue and increase as oceanographers begin to forecast changes in the distribution of ocean properties and meteorologists develop circulation models to begin global weather forecasting. The experiences gained in the calculation of large-scale sea-air interactions from marine surface meteorological observations may therefore be of help in future work. The manner in which the distribution and quality of marine meteorological data can be improved and processing can be facilitated has already been suggested by Seckel (1970). Additional suggestions concerning wind observations follow.

Marine surface meteorological observations will continue to be the mainstay of data for the computation of large-scale, sea-air interactions. Improvement in the quality of data is therefore of concern and can be achieved by proper placement of instruments and by proper techniques of observation. The quality of wind data can also be improved by avoiding erroneous vector addition of the "apparent" wind and the speed and direction of the ship. At present the apparent wind (observed anemometer speed and direction) is not reported in the ship's weather observations form (U.S. Department of Commerce, ESSA form 72-1). If this observation is reported on the weather form, the wind speed and direction can be calculated by computer.

In the region under consideration in this paper, the number of wind observations between the Equator and lat. 15°N. is inadequate. Better wind information in this latitude band is needed by the oceanographer to compute the curl of the

wind stress, and by the meteorologist to compute the wind divergence. A few buoys placed along the Equator and to the north--just a sufficient number to monitor the location of the intertropical convergence--would satisfy this need. In addition, the number of observations can be increased by an effort to enlist in the synoptic weather observations program the cooperation of all ships that travel through the areas where weather observations are insufficient.

ACKNOWLEDGMENTS

Saul Price, Environmental Science Services Administration, and Colin S. Ramage, University of Hawaii, reviewed the manuscript.

LITERATURE CITED

BJERKNES, J.
1969. Teleconnections from the equatorial Pacific. Mon. Weather Rev. 97: 163-172.

CHARNELL, ROBERT L., DAVID W. K. AU, and GUNTER R. SECKEL.
1967a. The Trade Wind Zone Oceanography Pilot Study. Part I: Townsend Cromwell cruises 1, 2, and 3, February to April 1964. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 552, v + 75 pp.
1967b. The Trade Wind Zone Oceanography Pilot Study. Part II: Townsend Cromwell cruises 4, 5, and 6, May to July 1964. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 553, v + 78 pp.
1967c. The Trade Wind Zone Oceanography Pilot Study. Part III: Townsend Cromwell cruises 8, 9, and 10, September to November 1964. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 554, v + 78 pp.
1967d. The Trade Wind Zone Oceanography Pilot Study. Part IV: Townsend Cromwell cruises 11, 12, and 13, December 1964 to February 1965. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 555, v + 78 pp.
1967e. The Trade Wind Zone Oceanography Pilot Study. Part V: Townsend Cromwell cruises 14 and 15, March and April 1965. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 556, iv + 54 pp.
1967f. The Trade Wind Zone Oceanography Pilot Study. Part VI: Townsend Cromwell cruises 16, 17, and 21, May and June 1965 and January 1966. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 557, iv + 59 pp.

DEARDORFF, JAMES W.
1968. Dependence of air-sea transfer coefficients on bulk stability. J. Geophys. Res. 73: 2549-2557.

HIDAKA, KOJI.
1958. Computation of the wind stresses over the oceans. Rec. Oceanogr. Works Jap. 4: 77-123.

McDONALD, WILLARD F.
1938. Atlas of climatic charts of the oceans. Dep. Agr. Weather Bur., Washington, D.C., W.B. 1247, vi + 65 pp.

MALKUS, JOANNE S.
1962. Large-scale interactions. In M. N. Hill (editor), The sea, ideas and observations on progress in the study of the seas, pp. 88-294. Interscience Publishers, New York, vol. 1.

REID, ROBERT O.
1948. The equatorial currents of the eastern Pacific as maintained by the stress of the wind. J. Mar. Res. 7: 74-99.

RUGGLES, KENNETH W.
1969. Oceanic wind profile observations during light to moderate winds. [Abstract.] (M18), AGU Fiftieth Annu. Meet. EOS - Trans. Amer. Geophys. Union 50: 160.

SCRIPPS INSTITUTION OF OCEANOGRAPHY.
1948. The field of mean wind stress over the North Pacific Ocean. Oceanogr. Rep. 14: 1-12.

SECKEL, GUNTER R.
1968. A time-sequence oceanographic investigation in the North Pacific trade wind zone. Trans. Amer. Geophys. Union 49: 377-387.
1970. The Trade Wind Zone Oceanography Pilot Study. Part VIII: Sea-level meteorological properties and heat exchange processes, July 1963 to June 1965. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 612, iv + 129 pp.

WU, JIN.
1969. Wind stress and surface roughness at air-sea interface. J. Geophys. Res. 74: 444-455.

MS #2010

APPENDIX TABLE A

Observed winds and derived wind properties, summarized by 5° square units of area and by months, July 1963 to June 1965

List of notations

- W(X) East-west component of wind velocity, m. sec.$^{-1}$; wind from the east is negative.
- W(Y) North-south component of wind velocity, m. sec.$^{-1}$; wind from the north is negative.
- WSQ Square of the wind speed, m.^{2} sec.$^{-2}$.
- T(X) East-west component of wind stress, 10^{-2} dynes cm.$^{-2}$; positive eastward.
- T(Y) North-south component of wind stress, 10^{-2} dynes cm.$^{-2}$; positive northward.

Example

Sample column for July 1963, lat. 0° to 5° N., long. 135° to 140° W.

	135	140	
WSQ	3	3	Mean location of observations: 0 + 3 = 3° N. lat., 135 + 3 = 138° W. long.
	30.6		Mean value of observations.
	38.0		Highest value.
	10.0		Lowest value.
	9.9		Standard deviation.
	7		Number of observations.

This example applies also to W(X), W(Y), T(X), and T(Y) except that the mean location of observations and the number of observations are not repeated.

JULY 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		4.1-	4.0-		1.8-	2.0-	7.7-		
		0.0			2.3	1.2	7.1-		
		6.2-			5.1-	5.7-	8.2-		
		2.2			2.2	1.5			
W(Y)		1.4	4.7		2.0	1.1	2.4-		
		5.8			5.3	3.6	0.1-		
		2.2-			0.9-	3.1-	4.2-		
		2.7			1.9	1.3			
WSQ		3 3	0 1		3 3	2 2	2 4		
		30.6	38.0		16.1	9.0	68.0		
		38.0			38.0	32.0	68.0		
		10.0			1.0	2.0	68.0		
		9.9			11.3	7.2			
	0	7	1	0	10	30	3	0	
T(X)		30.4-	32.0-		10.3-	7.9-	133.3-		
		0.0			8.0	2.0	123.0-		
		49.0-			31.0-	40.0-	143.0-		
		17.4			12.6	9.0			
T(Y)		8.3	38.0		11.2	3.7	41.3-		
		46.0			43.0	16.0	1.0-		
		17.0-			6.0-	11.0-	73.0-		
		19.5			14.5	5.2			

AUGUST 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		5.7-			2.2-	3.3-	4.8-	3.3-	
		2.2-			3.1	0.0	3.5-	0.0	
		8.1-			5.2-	7.6-	5.8-	6.2-	
					2.4	1.8		1.9	
W(Y)		4.3			2.9	1.9	0.3	1.2	
		5.8			5.9	7.0	2.1	2.3	
		1.4			2.4-	1.4-	2.1-	0.1-	
					2.3	1.8		0.9	
WSQ		3 4			3 4	2 2	2 4	2 3	
		61.0			24.4	21.1	27.0	16.5	
		77.0			60.0	86.0	38.0	38.0	
		33.0			7.0	1.0	17.0	2.0	
					16.0	21.3		11.9	
	0	3	0	0	10	36	3	6	
T(X)		99.3-			18.2-	26.7-	31.7-	18.3-	
		17.0-			15.0	0.0	17.0-	0.0	
		141.0-			69.0-	158.0-	47.0-	49.0-	
					23.6	37.1		16.1	
T(Y)		61.7			22.0	16.6	4.0	5.0	
		115.0			81.0	165.0	17.0	12.0	
		24.0			7.0-	19.0-	10.0-	0.0	
					23.7	31.8		4.4	

SEPTEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.2	4.8-	1.8-		1.5-	2.3-	2.8-		
	2.6	1.6-	0.7-		2.9	3.6	2.2		
	0.1-	7.0-	4.2-		5.6-	7.3-	6.8-		
		1.8			2.5	2.3	3.3		
W(Y)	1.4	9.4	4.4		2.8	1.8	2.1		
	7.2	12.1	7.1		7.2	9.1	5.1		
	4.4-	8.2	2.7		2.7-	0.1-	1.1-		
		1.4			2.7	1.9	2.0		
WSQ	5 2	3 4	2 2		2 3	2 2	2 4		
	39.0	116.6	28.0		23.7	16.8	26.8		
	52.0	166.0	68.0		52.0	86.0	52.0		
	26.0	77.0	10.0		7.0	1.0	7.0		
		28.7			18.6	19.0	14.2		
	2	5	4	0	14	37	11	0	
T(X)	7.5	142.0-	21.5-		12.1-	15.5-	24.9-		
	16.0	33.0-	4.0-		16.0	15.0	6.0		
	1.0-	207.0-	73.0-		62.0-	101.0-	76.0-		
		58.2			20.7	25.0	26.9		
T(Y)	26.5	275.6	42.5		23.4	13.4	12.7		
	80.0	437.0	123.0		80.0	213.0	31.0		
	27.0-	178.0	9.0		11.0-	0.0	9.0-		
		86.7			30.0	35.0	13.2		

OCTOBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		8.5-	9.0-		6.2-	3.3-	3.7-	4.4-	
		4.0-			2.7-	0.0	1.5	2.3-	
		13.6-			9.7-	9.8-	7.7-	7.6-	
					2.3	2.4	2.3	1.8	
W(Y)		7.3	5.1		1.2	1.7	1.2	1.6	
		10.6			3.4	6.2	7.2	6.3	
		4.8			1.4-	1.6-	4.4-	2.4-	
					2.0	1.8	3.3	3.6	
WSQ		3 4	0 1		3 4	2 2	3 4	3 3	
		147.3	106.0		49.3	23.2	31.3	38.0	
		208.0			106.0	96.0	60.0	60.0	
		106.0			17.0	1.0	2.0	21.0	
					31.3	25.5	18.1	13.9	
	0	3	1	0	9	33	18	5	
T(X)		300.3-	248.0-		96.1-	35.2-	33.2-	41.2-	
		124.0-			13.0-	0.0	2.0	22.0-	
		557.0-			268.0-	251.0-	107.0-	105.0-	
					85.1	65.5	28.0	32.1	
T(Y)		236.7	140.0		27.3	12.1	15.8	13.8	
		332.0			95.0	160.0	100.0	58.0	
		181.0			7.0-	5.0-	31.0-	19.0-	
					35.2	27.5	34.6	31.0	

NOVEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)			2.4-	2.4-	7.7-	3.6-	2.3-	2.2-	
			1.3	1.7-		0.5-	1.3	1.5	
			8.6-	4.3-		6.4-	6.2-	6.0-	
				1.0		2.1	1.7	2.5	
W(Y)			4.7	1.0	0.1-	2.3	1.4	1.1	
			7.6	5.1		5.2	3.6	4.9	
			1.4	4.9-		0.0	0.1-	1.8-	
				3.3		1.7	1.2	2.0	
WSQ			4 3	3 1	5 5	2 3	2 2	3 3	
			54.3	18.4	60.0	25.7	11.5	16.6	
			77.0	45.0		68.0	38.0	60.0	
			26.0	7.0		0.0	0.0	0.0	
				15.2		19.8	8.2	15.4	
	0	3		5	1	9	30	13	0
T(X)		53.7-		13.6-	117.0-	30.8-	10.4-	16.5-	
		18.0		5.0-		0.0	3.0	4.0	
		179.0-		40.0-		110.0-	49.0-	83.0-	
				13.4		32.9	10.9	22.7	
T(Y)		55.7		6.4	1.0-	20.9	5.3	8.9	
		105.0		47.0		91.0	16.0	68.0	
		30.0		30.0-		0.0	0.0	7.0-	
				24.4		26.3	5.1	19.0	

DECEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.1-	6.7-	5.3-		6.7-	3.9-	4.7-		
	2.4-	4.0-	1.8-		2.4-	0.0	2.1-		
	3.9-	10.8-	9.5-		10.7-	7.1-	7.5-		
		2.1	2.6		2.8	2.3	1.6		
W(Y)	1.1	2.4	4.4		0.4	1.1	0.1-		
	1.4	7.2	9.6		7.8	5.9	2.9		
	0.9	4.7-	9.0-		6.7-	4.0-	4.4-		
		5.1	5.9		4.1	2.3	2.3		
WSQ	5 1	3 4	2 3		3 4	2 2	3 4		
	12.0	81.3	89.3		69.8	27.0	29.9		
	17.0	153.0	153.0		117.0	86.0	77.0		
	7.0	26.0	26.0		7.0	0.0	4.0		
		38.9	38.2		40.4	20.7	20.4		
	2	9	7	0	10	26	11	0	
T(X)	12.5-	151.0-	134.0-		145.0-	33.7-	41.5-		
	7.0-	24.0-	11.0-		7.0-	0.0	5.0-		
	18.0-	372.0-	330.0-		315.0-	167.0-	156.0-		
		112.9	97.6		116.6	36.4	41.7		
T(Y)	4.0	82.4	98.0		13.1	13.3	5.2-		
	6.0	225.0	272.0		217.0	138.0	27.0		
	2.0	52.0-	248.0-		185.0-	32.0-	92.0-		
		109.5	169.0		97.6	32.4	30.7		

JANUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.0-	6.3-	6.8-		5.9-	3.6-	6.5-	6.6-	
	2.0	3.7-	3.4-		5.1-	0.4-	2.3-	1.7-	
	6.3-	7.8-	11.1-		6.3-	6.3-	10.8-	9.6-	
	2.8		2.6			1.5	2.6	2.6	
W(Y)	3.1	4.1	1.4		0.3	0.7	2.8-	3.7-	
	5.6	5.2	5.8		2.2	4.3	1.7	1.1-	
	2.3-	2.7	2.1-		2.2-	1.7-	6.7-	5.2-	
	3.0		2.7			1.4	2.0	1.5	
WSQ	3 4	3 3	2 2		3 4	2 2	3 4	2 2	
	30.2	59.0	62.5		38.5	17.5	61.4	66.0	
	45.0	68.0	128.0		45.0	45.0	117.0	106.0	
	10.0	32.0	21.0		26.0	0.0	13.0	26.0	
	11.3		34.4			12.2	36.6	30.7	
	5	4	8	0	4	31	22	6	
T(X)	18.2-	99.0-	129.5-		48.7-	19.6-	125.4-	125.5-	
	7.0	26.0-	22.0-		31.0-	0.0	9.0-	11.0-	
	58.0-	135.0-	348.0-		59.0-	59.0-	319.0-	267.0-	
	22.5		111.8			14.9	107.1	96.5	
T(Y)	18.8	59.7	7.6		4.7	5.0	45.6-	65.0-	
	39.0	91.0	70.0		21.0	40.0	47.0	9.0-	
	22.0-	30.0	64.0-		17.0-	5.0-	185.0-	145.0-	
	23.3		42.1			10.0	57.1	46.2	

FEBRUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.2-	5.8-			5.0-	5.0-	3.8-	6.3-	6.0-
	0.0	1.5-			1.3-	1.5	0.0	1.7-	3.6-
	5.0-	10.3-			8.2-	8.2-	10.8-	10.8-	8.0-
	1.5	3.4			1.9	2.6	2.2	3.1	
W(Y)	3.4	0.1-			1.2	0.6-	0.1	1.9-	4.2-
	5.9	7.1			4.4	4.4	3.3	1.4	0.0
	0.0	9.1-			4.8-	7.2-	6.0-	7.4-	7.9-
	1.9	5.2			2.2	2.9	2.1	2.3	
WSQ	3 3	2 3			2 5	2 4	2 2	3 4	3 2
	27.6	72.8			35.1	41.2	23.2	58.6	68.3
	60.0	106.0			68.0	117.0	117.0	128.0	106.0
	7.0	18.0			7.0	4.0	1.0	7.0	13.0
	19.8	29.9			17.5	27.0	22.2	40.0	
	9	5	0		14	19	40	19	3
T(X)	26.8-	126.0-			47.1-	61.6-	32.2-	121.5-	127.7-
	0.0	19.0-			4.0-	8.0	0.0	6.0-	15.0-
	69.0-	285.0-			143.0-	243.0-	319.0-	319.0-	187.0-
	24.2	105.8			37.0	60.2	53.3	116.7	
T(Y)	29.4	17.6-			8.6	17.9-	1.7-	25.8-	110.0-
	81.0	123.0			40.0	27.0	20.0	24.0	0.0
	0.0	214.0-			38.0-	207.0-	83.0-	230.0-	220.0-
	29.5	109.0			18.3	54.3	16.5	54.2	

MARCH 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		7.2-	5.0-	6.1-	5.2-	3.6-	5.6-	6.3-	
		2.9-	2.6-	2.6-	0.8-	0.4-	1.8-	5.1-	
		9.3-	7.8-	10.0-	12.1-	8.8-	9.1-	7.6-	
		2.1	1.7	2.1	2.3	2.3	2.0	0.8	
W(Y)		0.4	0.5-	1.2	0.1-	0.6	1.4-	1.2-	
		8.6	4.4	5.5	6.2	7.7	4.8	1.3	
		6.7-	4.2-	3.9-	5.3-	6.4-	8.2-	3.9-	
		5.8	2.4	2.8	3.0	2.1	3.6	1.6	
WSQ		3 4	2 3	2 3	3 4	2 2	2 4	1 3	
		90.3	33.9	50.9	41.6	23.2	50.2	45.0	
		128.0	68.0	100.0	166.0	77.0	106.0	60.0	
		68.0	13.0	21.0	2.0	0.0	17.0	26.0	
		21.2	19.4	22.4	34.0	23.7	30.0	13.9	
	0	6	10	10	19	41	18	8	
T(X)		173.3-	48.4-	86.2-	64.6-	33.3-	81.2-	66.5-	
		50.0-	11.0-	16.0-	1.0-	0.0	11.0-	31.0-	
		230.0-	135.0-	265.0-	437.0-	181.0-	245.0-	105.0-	
		65.4	42.8	72.0	92.5	43.5	74.4	28.4	
T(Y)		11.2	4.8-	10.3	11.7-	2.4	39.4-	14.1-	
		269.0	48.0	61.0	69.0	134.0	30.0	18.0	
		185.0-	73.0-	45.0-	163.0-	110.0-	220.0-	54.0-	
		149.9	29.8	32.2	48.3	28.0	71.7	22.0	

APRIL 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.4-	4.7-	5.2-	7.4-	5.7-	3.7-	8.4-	5.0-	
	0.0	0.0	0.0	3.0-	3.3-	1.0-	5.1-	2.4-	
	7.3-	11.6-	11.1-	11.0-	7.2-	9.2-	12.7-	9.6-	
	2.3	3.2	2.6	2.5	1.3	1.8	2.2	2.5	
W(Y)	1.4	2.9	0.7	2.3-	2.3	0.9	0.8	0.9-	
	4.6	9.3	5.9	2.4	3.9	3.6	5.1	0.9	
	2.5-	0.8-	8.4-	8.4-	0.1-	4.0-	5.0-	3.6-	
	2.1	3.0	3.7	4.2	1.2	1.8	1.9	1.7	
WSQ	4 3	4 4	3 3	4 3	4 4	2 2	3 4	3 2	
	31.4	50.9	47.9	83.2	40.6	20.7	80.1	35.7	
	60.0	153.0	166.0	166.0	52.0	96.0	166.0	106.0	
	7.0	7.0	7.0	10.0	21.0	1.0	26.0	7.0	
	17.8	51.7	47.0	53.3	13.1	18.4	41.8	34.2	
	7	8	18	8	9	37	24	7	
T(X)	39.6-	90.1-	83.7-	172.0-	53.9-	27.4-	180.0-	65.7-	
	0.0	0.0	0.0	11.0-	21.0-	1.0-	32.0-	7.0-	
	101.0-	403.0-	402.0-	369.0-	80.0-	237.0-	460.0-	267.0-	
	34.1	129.2	116.6	133.7	24.2	42.6	137.0	86.9	
T(Y)	9.4	62.6	18.7-	88.9-	20.0	7.4	22.4	21.3-	
	36.0	275.0	81.0	27.0	40.0	84.0	156.0	4.0	
	28.0-	5.0-	303.0-	303.0-	1.0-	24.0-	69.0-	100.0-	
	19.1	92.3	95.4	124.0	13.2	16.7	46.6	34.7	

MAY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.6-	4.9-	3.7-	1.6-	4.9-	3.7-	4.1-	5.1-	
	2.0-	2.3-	2.2-		1.3-	1.2-	2.7-	3.3-	
	6.8-	10.8-	4.9-		9.2-	8.6-	5.1-	8.7-	
		3.0	0.9		2.8	1.3	0.9	1.8	
W(Y)	2.2	1.0	3.2	4.3	2.4	1.8	2.0	1.5	
	2.4	2.9	6.7		5.9	3.9	3.5	4.9	
	1.6	2.0-	1.3		3.4-	1.6-	0.8	4.7-	
		1.8	1.8		2.9	1.6	0.9	3.6	
WSQ	4 1	2 4	2 3	5 2	3 4	2 2	2 3	2 3	
	40.7	37.2	28.2	21.0	46.0	20.9	21.7	43.6	
	52.0	117.0	60.0		96.0	77.0	26.0	86.0	
	7.0	10.0	7.0		7.0	2.0	17.0	26.0	
		40.1	17.8		36.1	13.2	3.6	19.4	
	4	5	5	1	7	36	11	9	
T(X)	58.5-	77.0-	27.2-	9.0-	85.6-	23.5-	22.6-	60.6-	
	6.0-	8.0-	6.0-		4.0-	2.0-	13.0-	21.0-	
	76.0-	319.0-	54.0-		235.0-	178.0-	31.0-	205.0-	
		121.1	16.3		87.0	27.8	6.9	55.5	
T(Y)	21.5	5.2	28.8	23.0	29.3	9.6	10.7	14.4	
	27.0	16.0	92.0		138.0	31.0	19.0	72.0	
	5.0	7.0-	4.0		88.0-	33.0-	4.0	52.0-	
		8.8	32.0		70.2	12.4	4.6	40.1	

JUNE 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.6-	4.0-	4.8-	3.4-	6.1-	3.8-	5.5-	4.2-	
	4.5-	3.6	1.1-	0.1-	2.6-	0.8-	4.0-	0.9-	
	7.6-	7.9-	7.9-	6.3-	9.7-	6.7-	8.2-	7.3-	
	0.9	3.5	2.0	2.2	2.1	1.3	1.2	1.9	
W(Y)	3.2	4.7	4.1	3.0	3.0	1.2	0.9	2.5	
	4.3	10.2	6.5	6.7	6.5	3.9	4.9	6.2	
	2.5	1.5	1.0	3.4-	4.3-	0.1-	2.5-	4.0-	
	0.5	2.7	1.6	3.0	2.7	1.4	2.2	3.0	
WSQ	3 2	3 4	2 2	3 4	3 3	2 2	3 4	3 3	
	42.9	58.4	46.4	34.6	58.2	19.2	36.9	36.0	
	77.0	117.0	106.0	45.0	106.0	60.0	68.0	60.0	
	26.0	21.0	22.0	10.0	17.0	1.0	17.0	7.0	
	14.9	33.0	22.3	13.0	30.1	11.6	14.3	17.9	
	7	10	12	7	16	29	15	12	
T(X)	58.9-	59.5-	60.1-	28.4-	102.9-	21.6-	48.9-	39.9-	
	28.0-	106.0	9.0-	1.0-	16.0-	1.0-	19.0-	3.0-	
	158.0-	220.0-	220.0-	59.0-	268.0-	93.0-	143.0-	101.0-	
	41.1	85.7	57.2	22.8	85.2	16.8	31.4	29.7	
T(Y)	33.1	88.5	48.9	22.0	53.0	7.6	7.4	24.9	
	89.0	301.0	181.0	62.0	181.0	53.0	68.0	69.0	
	16.0	8.0	8.0	32.0-	39.0-	0.0	28.0-	24.0-	
	23.2	89.9	44.9	26.9	60.1	11.9	22.4	29.2	

JULY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
h(X)	2.6-	2.4-	2.3-	2.6-	4.2-	3.1-	6.4-	3.4-	
	0.5	1.7		2.1-	1.4-	0.0	3.2-	3.4-	
	3.3-	6.7-		3.1-	7.9-	6.7-	10.7-	3.4-	
	1.2	3.0			1.6	1.2	1.9		
h(Y)	4.0	1.9	2.7	3.2	4.9	2.1	2.3	5.8	
	7.7	7.8		3.5	10.1	4.8	8.2	5.8	
	2.7	4.4-		3.0	4.8-	0.1-	2.4-	5.8	
	1.3	3.7			3.6	1.4	2.1		
WSQ	3 3	3 3	0 1	4 4	3 3	2 2	2 4	5 3	
	26.1	32.0	13.0	17.7	57.1	17.2	54.5	45.0	
	68.0	106.0		19.0	106.0	45.0	117.0	45.0	
	10.0	7.0		17.0	17.0	2.0	17.0	45.0	
	15.4	31.4			32.6	9.4	29.4		
	10	7	1	3	17	35	21	2	
T(X)	18.9-	36.7-	13.0-	13.0-	64.2-	15.7-	98.6-	32.0-	
	2.0	5.0		10.0-	15.0-	0.0	15.0-	32.0-	
	50.0-	185.0-		10.0-	220.0-	62.0-	315.0-	32.0-	
	13.0	62.1			55.6	11.5	77.4		
T(Y)	31.5	34.4	11.0	15.7	94.6	10.7	39.8	54.0	
	134.0	217.0		17.0	280.0	31.0	243.0	54.0	
	9.0	31.0-		15.0	38.0-	1.0-	13.0-	54.0	
	34.6	76.3			95.1	9.0	54.7		

AUGUST 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
h(X)	7.4-	6.9-	6.9-		2.9-	5.2-	6.1-	6.0-	
	6.7-	4.4-	1.4-		2.2-	2.0-	2.2-	2.2-	
	8.1-	9.1-	8.7-		3.6-	12.7-	9.9-	10.3-	
		1.4	2.5			2.4	2.0	2.2	
h(Y)	4.2	4.7	6.5		7.7	1.5	1.4	1.7	
	4.6	7.8	9.4		9.6	4.7	9.0	6.7	
	3.8	1.5	4.6		5.8	1.6-	3.7-	1.1-	
		2.3	1.7			1.7	2.7	2.1	
WSQ	1 5	2 4	3 3		3 4	2 2	1 5	2 3	
	72.0	77.4	69.8		72.0	37.9	49.8	48.1	
	86.0	106.0	153.0		106.0	166.0	140.0	106.0	
	50.0	21.0	60.0		38.0	7.0	13.0	7.0	
		26.1	31.0			30.7	28.0	28.9	
	2	8	6		2	39	46	15	
T(X)	141.0-	146.5-	185.8-		58.5-	64.5-	84.7-	85.8-	
	93.0-	24.0-	19.0-		17.0-	6.0-	9.0-	6.0-	
	139.0-	214.0-	278.0-		100.0-	460.0-	266.0-	285.0-	
		63.1	85.9			88.7	68.2	75.8	
T(Y)	80.0	106.7	167.8		156.5	12.0	21.5	25.2	
	187.0	217.0	325.0		267.0	77.0	297.0	138.0	
	53.0	8.0	105.0		46.0	33.0-	50.0-	9.0-	
		72.4	81.9			20.5	61.2	37.0	

SEPTEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
h(X)	5.5-	5.6-	3.4-	4.8-	4.1-	4.3-	3.8-	4.5-	
	4.0-	0.1-	2.0-	0.8-	0.9-	0.0	0.1-	0.8-	
	6.7-	10.8-	4.1-	7.7-	6.7-	7.9-	7.3-	9.2-	
		3.6		2.4	1.8	1.5	1.6	2.0	
h(Y)	6.6	5.5	0.5	2.9	5.3	1.8	1.3	0.8	
	9.8	8.6	1.6	9.1	11.1	6.5	6.2	7.0	
	2.3	0.1-	0.7-	0.1-	0.1-	0.1-	2.9-	1.8-	
		2.5		3.1	2.8	2.0	1.7	1.8	
WSQ	5 1	4 4	5 3	4 4	3 3	2 2	2 4	1 2	
	85.0	80.0	13.7	47.1	56.5	27.8	21.3	28.3	
	128.0	128.0	17.0	86.0	166.0	106.0	60.0	96.0	
	21.0	26.0	7.0	1.0	26.0	1.0	1.0	1.0	
		36.2		26.0	39.1	17.1	12.2	24.8	
	3	7	3	7	17	33	43	32	
T(X)	129.0-	143.3-	14.7-	57.3-	61.4-	32.4-	22.8-	44.3-	
	22.0-	0.0	6.0-	1.0-	6.0-	0.0	0.0	1.0-	
	135.0-	319.0-	19.0-	110.0-	237.0-	220.0-	101.0-	237.0-	
		110.5		37.2	58.9	35.7	17.6	57.4	
T(Y)	178.0	108.0	1.3	49.4	94.4	16.1	8.2	11.2	
	305.0	269.0	5.0	213.0	402.0	181.0	49.0	165.0	
	12.0	3.0-	4.0-	1.0-	1.0-	0.0	20.0-	40.0-	
		88.0		73.3	116.7	32.3	12.8	34.2	

OCTOBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
h(X)	3.2-	4.0-	5.1-	0.0	2.9-	5.7-	5.1-	4.4-	
	0.2-	3.2-	0.0		0.1-	1.6-	0.0	1.0	
	5.1-	5.0-	10.3-		6.0-	10.2-	8.9-	8.9-	
	1.5				1.9	2.2	2.5	2.3	
h(Y)	1.8	5.1	0.1-	0.0	5.3	3.0	1.7	0.5	
	3.9	6.7	0.0		10.3	6.6	4.7	5.5	
	0.0	2.6	0.1-		4.8-	0.1-	1.1-	5.2-	
	1.6				3.0	1.8	1.8	3.1	
WSQ	4 3	2 3	1 3	3 5	3 4	2 3	3 4	3 2	
	18.4	45.7	53.0	0.0	49.5	49.7	37.9	34.7	
	26.0	62.0	106.0		106.0	133.0	100.0	106.0	
	1.0	17.0	0.0		17.0	4.0	10.0	1.0	
	9.7				25.2	32.0	25.8	28.7	
	10	3	2	1	24	60	18	20	
T(X)	17.8-	46.0-	142.5-	0.0	35.8-	85.5-	61.8-	51.6-	
	0.0	15.0-	0.0		0.0	4.0-	0.0	1.0	
	32.0-	69.0-	285.0-		118.0-	308.0-	237.0-	245.0-	
	11.6				37.1	89.3	67.3	68.8	
T(Y)	9.4	61.7	1.0-	0.0	78.7	42.4	19.7	8.3-	
	24.0	92.0	0.0		285.0	209.0	122.0	53.0	
	0.0	12.0	2.0-		38.0-	1.0-	9.0-	145.0-	
	10.2				77.8	45.7	31.8	50.6	

NOVEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.1-	4.8-	5.8-	3.8-	6.9-	4.6-	6.8-	7.3-	
	1.6-	1.8-	0.1-	0.9-	3.6-	1.5-	3.4-	2.8-	
	7.5-	6.6-	8.1-	8.1-	10.3-	11.2-	10.3-	10.3-	
	2.5	1.6	2.4	2.7	2.1	1.7	2.4	2.9	
W(Y)	5.5	3.9	6.2	1.5	4.2	1.2	0.1	0.3	
	7.2	5.9	11.3	2.8	7.8	4.3	1.2	2.3	
	3.8	1.1	1.4	0.5	0.1-	2.3-	0.1-	0.1-	
	1.3	1.8	2.7	0.9	3.2	1.7	0.4	0.8	
WSQ	4 1	3 4	2 2	5 3	2 4	2 2	3 3	2 2	
	64.6	43.8	86.0	24.6	80.7	28.2	52.0	62.6	
	96.0	68.0	128.0	68.0	106.0	128.0	106.0	106.0	
	21.0	26.0	38.0	1.0	13.0	2.0	13.0	13.0	
	26.0	15.9	25.0	24.8	33.8	21.6	34.4	40.0	
	5	6	10	5	11	34	9	7	
T(X)	100.0-	52.2-	123.9-	40.0-	162.7-	38.5-	111.3-	147.1-	
	9.0-	11.0-	3.0-	1.0-	14.0-	3.0-	14.0-	11.0-	
	194.0-	110.0-	220.0-	141.0-	285.0-	349.0-	285.0-	285.0-	
	71.6	32.4	62.5	52.1	88.8	57.3	103.7	122.7	
T(Y)	94.8	43.5	152.4	11.6	102.7	10.6	0.1-	0.3	
	160.0	91.0	354.0	24.0	217.0	58.0	5.0	9.0	
	23.0	10.0	24.0	1.0	2.0-	10.0-	2.0-	2.0-	
	51.1	31.8	101.1	9.5	85.9	16.1	2.0	3.7	

DECEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.5-	6.1-	6.7-		5.9-	3.2-	6.7-	5.6-	
	3.3-	2.7-	4.0-		4.0-	0.0	3.9-	1.2-	
	6.8-	9.7-	10.2-		8.1-	6.7-	12.7-	10.1-	
	1.1	1.9	2.2		1.4	1.5	2.3	2.4	
W(Y)	2.3	4.8	4.8		4.0	1.4	0.5	2.7	
	5.9	7.8	7.1		6.3	4.7	5.9	7.0	
	0.5-	2.1	1.7		2.1	0.1-	3.7-	1.9-	
	1.9	1.7	1.7		1.3	1.5	3.1	3.0	
WSQ	1 1	2 4	3 3		2 4	2 2	2 4	3 2	
	40.0	67.4	74.6		55.0	17.0	60.2	54.0	
	66.0	106.0	106.0		86.0	45.0	166.0	106.0	
	26.0	38.0	26.0		26.0	2.0	26.0	2.0	
	11.7	17.8	24.4		20.8	11.9	35.9	31.9	
	7	10	8		7	27	13	13	
T(X)	49.3-	107.6-	140.9-		88.1-	17.6-	111.9-	95.2-	
	21.0-	37.0-	24.0-		28.0-	0.0	24.0-	2.0-	
	76.0-	268.0-	281.0-		189.0-	62.0-	458.0-	280.0-	
	18.5	69.2	84.9		58.4	14.5	115.8	79.9	
T(Y)	23.3	81.7	90.7		59.4	7.5	0.1-	44.9	
	81.0	161.0	140.0		109.0	40.0	81.0	165.0	
	4.0-	17.0	20.0		16.0	1.0-	85.0-	52.0-	
	25.4	37.2	40.9		38.0	11.3	46.4	64.9	

JANUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.0-	5.5-			6.2-	6.0-	3.9-	5.2-	5.0-
	2.6-	0.0			2.5-	4.6-	0.0	0.1	2.0-
	12.9-	7.8-			7.6-	8.1-	7.3-	8.8-	11.2-
	3.0	2.6				1.2	1.6	2.3	
W(Y)	1.6	2.8			0.2-	1.6	1.4	0.1-	0.7-
	4.1	7.0			2.6	4.6	4.9	6.5	1.9
	0.1-	0.0			1.4-	0.9-	0.3-	9.1-	2.1-
	1.4	2.5				2.1	1.8	2.9	
WSQ	3 3	3 3			3 4	3 4	2 2	1 4	4 3
	63.1	51.3			46.7	44.6	22.5	40.4	41.2
	166.0	86.0			60.0	86.0	60.0	106.0	128.0
	7.0	0.0			7.0	21.0	0.0	2.0	7.0
	43.7	29.2				23.3	15.7	22.8	
	14	6	C	4		5	36	58	4
T(X)	138.9-	87.0-			79.5-	72.8-	25.8-	57.2-	96.5-
	7.0-	0.0			7.0-	25.0-	0.0	1.0	6.0-
	466.0-	141.0-			105.0-	189.0-	101.0-	220.0-	349.0-
	133.4	52.9				69.2	22.0	49.6	
T(Y)	17.7	54.5			0.8-	29.8	11.2	0.3	10.0
	70.0	165.0			36.0	107.0	68.0	181.0	58.0
	4.0-	0.0			19.0-	6.0-	1.0-	214.0-	10.0-
	22.2	58.2				41.7	16.5	49.7	

FEBRUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.3-	5.0-	4.9-		7.7-	6.2-	4.0-	5.7-	7.4-
		4.9-			4.0-	2.6-	0.8-	1.6-	1.7-
		5.3-			10.8-	13.2-	10.8-	9.7-	13.9-
					2.7	3.2	2.3	2.6	3.3
W(Y)	2.7	1.8	1.7		2.3	2.5	1.1	0.8-	1.8-
		1.9			6.1	8.2	4.3	3.4	2.0
		1.7			4.2-	4.2-	2.0-	4.9-	8.4-
					3.5	3.0	1.7	2.3	2.5
WSQ	5 0	3 4	0 1		4 5	2 3	2 2	3 4	3 2
	13.0	28.0	26.0		83.0	63.3	25.2	45.5	76.1
		32.0			153.0	179.0	117.0	106.0	193.0
		26.0			21.0	17.0	1.0	7.0	7.0
					49.9	50.9	28.6	30.7	53.3
	1	3	1		5	13	26	13	14
T(X)	10.0-	32.3-	30.0-		181.0-	120.7-	41.5-	86.2-	170.5-
		30.0-			22.0-	13.0-	1.0-	5.0-	5.0-
		37.0-			372.0-	499.0-	319.0-	268.0-	548.0-
					144.7	148.5	81.1	84.8	148.4
T(Y)	11.0	11.7	11.0		55.6	45.6	6.4	4.8-	46.9-
		13.0			210.0	230.0	40.0	95.0	6.0
		11.0			73.0-	73.0-	7.0-	76.0-	303.0-
					96.6	75.1	10.9	38.7	82.1

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		6.0-	4.8-	7.3-	6.2-	3.7-	6.6-	3.0-	
		3.5-		5.9-	3.3-	1.2-	4.8-	1.9-	
		9.6-		10.3-	10.1-	9.1-	9.6-	4.9-	
		1.8		1.0	1.7	1.8	1.4	1.1	
W(Y)		4.1-	1.8-	0.3-	2.4-	0.5-	3.4-	0.5-	
		0.1-		4.7	6.3	3.9	1.1	2.8	
		8.1-		7.1-	7.1-	5.2-	9.9-	3.2-	
		2.1		3.1	3.6	2.1	2.9	2.0	
WSQ		3 3	0 2	3 4	4 3	2 2	3 4	2 2	
		60.1	26.0	64.1	60.5	21.8	65.8	14.2	
		106.0		106.0	106.0	106.0	128.0	32.0	
		21.0		38.0	26.0	2.0	26.0	4.0	
		29.4		15.8	20.1	22.1	32.6	10.0	
	0	14	1	14	17	32	15	8	
T(X)		101.9-	30.0-	116.6-	98.0-	30.6-	115.7-	14.0-	
		19.0-		49.0-	21.0-	2.0-	30.0-	4.0-	
		267.0-		285.0-	280.0-	245.0-	267.0-	35.0-	
		76.5		53.0	65.1	52.7	77.1	11.1	
T(Y)		72.9-	11.0-	7.1-	40.3-	6.9-	76.4-	0.8-	
		1.0-		80.0	109.0	31.0	10.0	20.0	
		189.0-		167.0-	167.0-	145.0-	308.0-	15.0-	
		65.0		59.0	61.1	28.8	87.1	11.2	

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)		4.9-	2.4-		6.0-	3.5-	6.1-	6.6-	
		1.8-	0.7-		3.9-	1.2-	1.9-	4.4-	
		10.6-	4.1-		10.1-	7.2-	11.3-	9.6-	
		2.9			1.9	1.2	2.2	1.7	
W(Y)		1.5-	2.3		1.5-	0.2-	1.8-	1.9-	
		4.8	4.0		0.0	1.0	1.7	0.1-	
		7.4-	0.7		3.4-	3.0-	6.4-	4.7-	
		3.3			1.2	0.6	2.2	1.7	
WSQ		3 4	3 3		3 3	2 2	2 4	3 2	
		46.0	17.0		43.4	13.9	49.7	52.6	
		128.0	17.0		106.0	52.0	128.0	106.0	
		4.0	17.0		17.0	2.0	4.0	26.0	
		47.9			27.3	10.1	30.7	26.0	
	0	8	2	0	10	35	22	7	
T(X)		88.1-	11.5-		75.4-	16.3-	88.9-	93.9-	
		4.0-	4.0-		18.0-	2.0-	4.0-	27.0-	
		332.0-	19.0-		280.0-	80.0-	354.0-	267.0-	
		123.9			75.9	14.7	80.7	79.4	
T(Y)		44.2-	11.0		20.6-	0.8-	31.0-	27.1-	
		30.0	19.0		0.0	4.0	11.0	0.0	
		230.0-	3.0		52.0-	16.0-	163.0-	100.0-	
		82.2			19.1	3.2	45.0	33.9	

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.9-	4.9-	4.2-		5.3-	3.1-	3.6-	4.1-	
	0.9-	3.3-	1.5-		3.5-	1.5-	1.0-	2.5-	
	6.3-	6.5-	7.2-		7.2-	8.7-	8.2-	4.9-	
	1.9		2.1			1.5	1.9		
W(Y)	3.0	5.5-	0.6		1.8-	0.1-	0.2	1.8	
	7.2	3.7-	2.8		0.7-	0.0	4.9	3.3	
	2.3-	9.2-	2.7-		2.7-	3.2-	7.0-	0.4	
	3.2		1.8			0.6	2.5		
WSQ	3 3	3 4	1 3		3 4	2 2	2 4	3 3	
	38.5	60.7	25.3		34.2	12.5	22.6	21.2	
	60.0	96.0	66.0		60.0	86.0	117.0	26.0	
	21.0	32.0	2.0		13.0	2.0	2.0	7.0	
	12.7		19.9			15.3	26.9		
	6	4	6	0	4	33	21	4	
T(X)	34.2-	68.5-	34.2-		47.5-	17.6-	32.0-	22.7-	
	6.0-	30.0-	3.0-		14.0-	3.0-	2.0-	7.0-	
	58.0-	99.0-	100.0-		100.0-	203.0-	243.0-	30.0-	
	18.0		32.7			34.3	52.5		
T(Y)	27.7	96.5-	0.7		17.0-	2.4-	3.1-	10.7	
	100.0	26.0-	20.0		3.0-	0.0	68.0	20.0	
	22.0-	237.0-	37.0-		37.0-	76.0-	207.0-	1.0	
	38.0		18.3			13.0	50.1		

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.9	2.6-	3.0-	4.9-	3.8-	3.0-	4.5-	3.0-	
	5.8	3.1	0.1-	0.0	1.0-	2.7	0.0	1.5	
	1.0	7.9-	4.9-	9.1-	8.6-	8.8-	9.6-	5.8-	
				2.0	2.4	1.8	2.7	3.5	
W(Y)	2.5	0.5	1.2	0.6	0.8-	0.3-	1.6-	1.3	
	6.1	8.7	7.2	5.1	2.0	1.6	2.0	2.7	
	0.7-	9.5-	4.0-	3.1-	3.1-	4.8-	5.1-	2.2-	
				1.7	1.4	1.1	1.8	1.8	
WSQ	4 2	4 4	3 3	3 3	3 4	2 2	3 4	4 3	
	26.7	79.2	29.2	31.5	23.2	13.7	33.7	25.6	
	38.0	153.0	52.0	86.0	77.0	77.0	106.0	38.0	
	4.0	26.0	13.0	10.0	1.0	0.0	7.0	4.0	
				20.3	26.1	13.9	28.3	15.3	
	3	4	4	14	15	33	13	5	
T(X)	19.3	62.0-	16.5-	46.5-	41.1-	17.2-	54.5-	26.6-	
	46.0	72.0	1.0-	0.0	1.0-	9.0	0.0	5.0	
	4.0	272.0-	30.0-	214.0-	178.0-	181.0-	267.0-	47.0-	
				52.4	62.0	30.5	73.4	24.6	
T(Y)	21.3	18.5-	16.7	7.4	8.8-	1.7-	17.7-	6.0	
	49.0	205.0	80.0	47.0	6.0	5.0	6.0	17.0	
	2.0-	330.0-	24.0-	11.0-	63.0-	38.0-	100.0-	17.0-	
				15.8	17.1	7.0	27.0	12.5	

JULY 1963	LONGITUDE WEST								
	130	135	140	145	150	155	160	165	170
W(X)	5.7-	3.0-		2.5-	4.1-		7.7-	6.9-	
	2.6-	0.0		1.3	0.1-		6.3-	4.9-	
	10.3-	6.2-		6.3-	6.7-		8.6-	10.1-	
		1.8							
W(Y)	0.4	1.0		1.8-	1.1		6.6-	4.7-	
	1.7	8.2		1.6	8.2		5.3-	3.8-	
	0.1-	1.4-		5.3-	3.9-		7.4-	6.0-	
		3.1							
WSC	4 4	3 2		3 4	3 3		3 2	3 3	
	41.2	22.7		36.0	53.3		104.3	74.2	
	136.0	77.0		68.0	68.0		128.0	117.0	
	7.0	0.0		4.0	32.0		68.0	60.0	
		24.8							
	4	7	0	2	3	0	3	4	
T(X)	88.5-	22.3-		53.0-	44.0-		207.0-	135.0-	
	7.0-	0.0		3.0	1.0-		109.0-	68.0-	
	285.0-	63.0-		109.0-	92.0-		269.0-	299.0-	
		22.3							
T(Y)	2.2	23.3		44.5-	27.3		176.7-	79.5-	
	11.0	170.0		4.0	143.0		93.0-	54.0-	
	2.0-	7.0-		93.0-	54.0-		230.0-	112.0-	
		60.9							

AUGUST 1963	LONGITUDE WEST								
	130	135	140	145	150	155	160	165	170
W(X)	0.8-	1.5-	1.6-	5.4-	4.8-	5.8-	5.5-	9.8-	
	5.1	1.4	1.2-	1.0-	0.0	4.6-	1.3-	5.1-	
	4.8-	4.4-	2.1-	8.8-	9.3-	7.5-	12.5-	14.5-	
	3.3	2.0		2.7	2.7	1.2	3.9		
W(Y)	0.6	4.6	2.2	3.0	0.3-	0.3-	1.0-	2.7-	
	12.1	8.1	3.5	8.6	8.6	1.7	4.3	0.0	
	6.8-	2.6-	1.0	0.2-	4.0-	4.4-	7.6-	5.4-	
	4.4	4.2		3.3	3.3	2.2	2.5		
WSQ	4 3	2 2	2 3	3 3	2 4	2 2	3 3	2 3	
	31.5	45.4	9.5	56.7	40.6	40.4	52.8	132.0	
	166.0	68.0	17.0	128.0	128.0	77.0	166.0	238.0	
	1.0	13.0	2.0	1.0	0.0	21.0	7.0	26.0	
	39.9	22.3		41.9	38.9	21.3	57.7		
	14	5	2	7	10	5	12	2	
T(X)	14.1-	8.2-	6.0-	100.0-	70.0-	64.4-	113.7-	335.0-	
	47.0	24.0	2.0-	1.0-	0.0	25.0-	7.0-	32.0-	
	163.0-	27.0-	10.0-	230.0-	230.0-	156.0-	466.0-	638.0-	
	46.6	18.8		81.6	82.1	49.8	168.7		
T(Y)	28.3	71.0	9.5	70.1	17.5	13.6-	0.2	119.5-	
	437.0	141.0	17.0	269.0	269.0	13.0	156.0	0.0	
	76.0-	16.0-	2.0	2.0-	54.0-	92.0-	105.0-	239.0-	
	116.2	65.3		98.6	85.4	39.6	54.6		

SEPTEMBER 1963	LONGITUDE WEST								
	130	135	140	145	150	155	160	165	170
W(X)	1.9-	2.5-	4.4-	3.3-	3.1-	0.4	2.3-		
	2.6	1.5	3.1-	2.0-	0.4-	5.9	7.8		
	8.2-	7.0-	4.8-	5.1-	5.9-	10.8-	7.6-		
	3.6	2.4			1.8		3.5		
W(Y)	2.9	4.2	2.0-	0.4-	0.8-	3.5	0.9		
	7.2	12.1	1.8-	0.0	2.0	5.0	4.9		
	1.4-	3.1-	2.7-	1.7-	5.0-	0.1-	2.7-		
	3.2	4.2			2.2		2.3		
WSC	3 3	2 3	5 3	3 4	3 5	3 2	3 2		
	35.3	47.5	23.7	13.2	18.7	60.2	23.1		
	68.0	166.0	26.0	26.0	60.0	117.0	68.0		
	7.0	10.0	17.0	7.0	4.0	26.0	0.0		
	22.9	45.6			18.4		18.3		
	10	12	4	4	7	4	16	0	
T(X)	28.3-	41.3-	26.2-	15.0-	21.9-	47.7-	10.6-		
	7.0	5.0	15.0-	6.0-	1.0-	81.0	135.0		
	143.0-	207.0-	30.0-	32.0-	81.0-	319.0-	105.0-		
	49.7	66.1			25.9		45.5		
T(Y)	26.4	80.8	11.5-	1.2-	11.9-	33.0	1.7		
	30.0	437.0	11.0-	0.0	5.0	69.0	31.0		
	19.0-	13.0-	13.0-	5.0-	69.0-	3.0-	48.0-		
	36.6	126.7			23.9		18.5		

OCTOBER 1963	LONGITUDE WEST								
	130	135	140	145	150	155	160	165	170
W(X)	2.0-	1.5			4.5-	4.4-	3.7-	0.3-	
	2.1	4.0			0.0	2.7-	2.1	3.9	
	9.7-	1.9-			7.8-	6.2-	6.7-	4.4-	
	3.5				2.4		2.0		
W(Y)	1.8	9.4			0.8-	2.6-	0.4-	1.1	
	5.8	11.2			6.6	1.6-	8.2	4.8	
	3.3-	6.8			6.7-	3.7-	7.8-	2.6-	
	3.3				4.6		4.4		
WSQ	4 2	3 1			3 4	4 1	3 3	2 2	
	30.6	99.3			48.4	31.0	37.8	32.0	
	106.0	140.0			106.0	52.0	77.0	38.0	
	7.0	52.0			0.0	10.0	7.0	26.0	
	28.4				28.1		19.8		
	9	3	0	0	11	2	18	2	
T(X)	34.0-	35.0			68.5-	39.0-	33.8-	2.0	
	17.0	130.0			0.0	9.0-	17.0	31.0	
	268.0-	52.0-			217.0-	69.0-	138.0-	27.0-	
	83.9				64.6		31.2		
T(Y)	19.7	241.3			33.9-	23.0-	6.4-	11.0	
	95.0	368.0			61.0	5.0-	143.0	38.0	
	21.0-	76.0			185.0-	41.0-	135.0-	16.0-	
	34.0				71.6		63.1		

NOVEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.8-	5.4-	2.2	1.5-	5.2-	2.3-	7.4-	5.3-	
	0.0	1.5	2.5	0.0	1.4-	1.2	1.2-	0.4-	
	8.6-	9.8-	2.0	2.7-	9.6-	7.2-	12.7-	7.6-	
	2.5	3.4					3.5	1.9	
W(Y)	1.6-	1.4-	1.3-	5.1-	1.6-	0.2-	0.5-	2.1-	
	3.9	4.4	0.4-	2.6-	0.5-	1.2	6.6	0.4	
	7.4-	5.7-	2.3-	7.8-	3.6-	2.7-	3.6-	6.1-	
	3.5	3.2					3.1	1.8	
WSQ	4 3	3 3	5 5	2 3	4 5	3 1	3 2	4 4	
	43.4	53.2	8.5	33.7	43.7	21.3	76.4	39.2	
	128.0	123.0	10.0	68.0	106.0	60.0	166.0	68.0	
	0.0	21.0	7.0	7.0	2.0	2.0	17.0	0.0	
	37.5	44.9					44.7	19.9	
	9	8	2	3	4	3	10	10	
T(X)	70.7-	100.5-	7.0	19.7-	95.2-	33.3-	169.1-	55.9-	
	0.0	8.0	7.0	0.0	2.0-	2.0	10.0-	0.0	
	269.0-	305.0-	7.0	48.0-	267.0-	100.0-	458.0-	130.0-	
	84.2	121.4					145.8	37.6	
T(Y)	42.9-	47.9-	4.5-	57.3-	30.7-	11.0-	33.1-	25.0-	
	24.0	24.0	1.0-	7.0-	1.0-	2.0	61.0	3.0	
	230.0-	180.0-	8.0-	135.0-	100.0-	37.0-	100.0-	106.0-	
	80.4	78.0					51.0	31.6	

DECEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.3-	7.8-	9.0-	8.1-	6.2-	7.2-	8.1-	6.3-	
	2.0-	5.5-	8.2-	7.1-	5.9-		5.0-	2.9-	
	8.6-	9.8-	9.8-	10.7-	6.7-		10.8-	9.3-	
	2.1	1.3		1.3			1.8	1.5	
W(Y)	4.1-	5.4-	9.1-	3.1-	4.6-	2.7-	2.2-	3.3-	
	0.0	2.5-	8.4-	1.8	3.9-		1.9	0.3-	
	7.8-	8.4-	9.9-	4.4-	5.0-		7.4-	5.8-	
	2.6	2.1		2.5			3.4	1.2	
WSQ	3 3	3 2	2 2	3 3	2 5	4 1	3 2	4 3	
	55.7	96.9	166.0	83.2	60.0	60.0	85.0	55.1	
	128.0	166.0	166.0	117.0	60.0		153.0	98.0	
	7.0	52.0	166.0	68.0	60.0		40.0	12.0	
	29.8	38.1		17.3			37.0	19.3	
	16	12	2	5	3	1	9	44	
T(X)	80.9-	193.7-	325.0-	181.2-	84.7-	100.0-	181.6-	91.5-	
	6.0-	61.0-	296.0-	123.0-	81.0-		42.0-	14.0-	
	269.0-	354.0-	354.0-	315.0-	92.0-		368.0-	243.0-	
	53.5	93.2		68.1			110.4	55.7	
T(Y)	86.7-	143.6-	331.5-	59.2-	64.0-	37.0-	57.4-	46.9-	
	0.0	28.0-	303.0-	53.0	54.0-		43.0	2.0-	
	230.0-	303.0-	360.0-	92.0-	69.0-		230.0-	129.0-	
	94.3	94.6		56.6			95.5	29.3	

JANUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.6-	7.7-	6.7-	8.2-	7.7-	10.6-	8.6-	7.4-	
	5.9-	4.3-	5.0-	7.0-	2.2-	10.6-	4.8-	3.8-	
	9.6-	11.1-	9.3-	9.6-	10.6-	10.6-	12.5-	11.7-	
	1.0	2.0	1.7	0.8	2.9		2.1	2.0	
W(Y)	4.9-	2.7-	0.3-	5.2-	3.0-	4.0-	4.6-	4.1-	
	1.4-	0.1-	5.9	1.7-	1.3-	4.0-	3.4	0.6-	
	6.0-	5.2-	3.4-	6.7-	4.0-	4.0-	10.0-	7.1-	
	1.3	1.4	3.1	1.8	0.9		3.3	1.4	
WSQ	3 2	4 3	2 2	2 3	2 3	2 4	3 3	4 3	
	84.5	73.4	56.8	97.4	78.5	128.0	111.3	77.2	
	117.0	128.0	86.0	106.0	128.0	128.0	238.0	173.0	
	45.0	38.0	26.0	86.0	7.0	128.0	26.0	21.0	
	16.2	30.2	22.9	9.9	42.4		48.0	37.3	
	24	14	6	7	6	4	26	44	
T(X)	172.0-	154.6-	103.8-	211.9-	186.8-	332.0-	243.3-	152.2-	
	58.0-	40.0-	31.0-	165.0-	6.0-	332.0-	30.0-	21.0-	
	275.0-	348.0-	217.0-	267.0-	332.0-	332.0-	518.0-	434.0-	
	55.1	106.5	76.0	29.1	120.2		129.3	113.9	
T(Y)	112.7-	44.1-	5.8-	135.1-	70.2-	124.0-	134.7-	84.2-	
	19.0-	3.0-	81.0	40.0-	4.0-	124.0-	95.0	8.0-	
	162.0-	124.0-	76.0-	185.0-	124.0-	124.0-	442.0-	237.0-	
	38.9	29.3	46.9	51.3	44.6		122.8	63.1	

FEBRUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.7-	6.3-	7.3-	7.3-	5.6-	6.2-	8.5-		
	0.1	0.0	2.3-	2.4-	1.5-	3.8-	4.4-		
	9.6-	12.1-	12.1-	12.1-	9.6-	9.6-	12.1-		
	2.7	2.9	3.0	2.5	3.5	2.0	2.1		
W(Y)	4.1-	4.3-	5.0-	4.4-	5.1-	4.4-	4.7-		
	9.3	4.3	0.1-	1.4-	2.7-	2.7-	1.8		
	11.8-	9.9-	9.9-	9.9-	8.2-	6.7-	9.9-		
	4.6	3.2	2.4	2.2	2.1	1.3	3.0		
WSQ	3 3	3 3	4 3	3 4	3 4	4 2	3 3		
	67.6	77.2	93.7	84.2	75.0	64.6	107.8		
	140.0	166.0	166.0	166.0	106.0	106.0	166.0		
	0.0	26.0	21.0	40.0	10.0	45.0	26.0		
	32.3	43.5	45.7	43.5	33.1	21.4	40.3		
	28	18	15	19	7	5	16	0	
T(X)	79.8-	144.8-	194.6-	161.7-	136.3-	105.6-	234.8-		
	3.0	0.0	12.0-	25.0-	5.0-	47.0-	27.0-		
	267.0-	437.0-	437.0-	437.0-	267.0-	267.0-	437.0-		
	68.5	120.8	132.8	123.5	114.3	82.8	110.7		
T(Y)	78.4-	97.8-	118.1-	95.7-	97.9-	64.4-	133.9-		
	217.0	30.0	2.0-	19.0-	9.0-	37.0-	53.0		
	390.0-	360.0-	360.0-	360.0-	171.0-	100.0-	360.0-		
	127.6	94.6	92.1	93.2	46.4	26.8	109.4		

MARCH 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.5-	5.6-	8.6-	9.0-	7.5-	7.3-	8.3-	4.■-	
	2.3-	2.4-	7.8-	7.5-	3.0-	3.5-	4.3-	0.0	
	8.0-	8.0-	9.8-	11.6-	13.0-	10.1-	13.5-	8.9-	
	1.6	2.4			2.6	1.7	2.3	3.0	
W(Y)	5.0-	6.0-	7.4-	0.6	4.9-	2.6-	3.6-	3.0-	
	0.1-	4.7-	6.7-	2.7	1.8-	0.1-	2.1	0.0	
	8.3-	7.6-	8.4-	2.2-	7.0-	5.3-	7.4-	5.2-	
	2.4	1.1			1.2	1.6	2.9	1.8	
WSQ	4 3	3 2	3 1	5 3	3 4	3 2	3 3	3 2	
	63.7	74.3	129.7	39.3	89.6	66.0	94.9	43.4	
	117.0	106.0	166.0	140.0	193.0	106.0	208.0	106.0	
	10.0	39.0	106.0	64.0	26.0	17.0	21.0	0.0	
	32.7	22.5			45.1	23.4	44.2	35.5	
	14	6	3	3	10	20	18	5	
T(X)	100.4-	122.2-	271.3-	208.0-	188.6-	132.8-	209.4-	73.8-	
	8.0-	26.0-	217.0-	117.0-	24.0-	17.0-	23.0-	0.0	
	203.0-	217.0-	354.0-	384.0-	513.0-	280.0-	553.0-	245.0-	
	66.5	78.3			136.7	75.3	133.0	88.0	
T(Y)	99.6-	113.7-	231.7-	3.3-	114.7-	43.2-	94.8-	44.6-	
	1.0-	43.0-	185.0-	41.0	11.0-	1.0-	47.0	0.0	
	246.0-	185.0-	303.0-	71.0-	207.0-	110.0-	230.0-	145.0-	
	83.9	47.4			59.9	31.7	84.6	51.8	

APRIL 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.4-	6.7-	7.1-	9.0-	7.5-	4.7-	7.8-	6.0-	
	1.4	3.9-	5.8-	6.3-	2.9-	0.4-	2.4-	2.6-	
	12.1-	9.8-	8.0-	10.6-	11.6-	10.6-	13.0-	10.1-	
	2.9	1.7			2.7	3.6	3.4	2.3	
W(Y)	1.8-	4.7-	4.2-	0.5-	4.0-	3.8-	1.8-	1.4-	
	4.7	2.6-	3.4-	2.9	2.6-	0.3-	4.3	0.0	
	6.0-	8.4-	4.7-	6.3-	5.0-	6.0-	7.9-	3.3-	
	3.0	1.3			0.7	2.1	3.0	1.3	
WSQ	3 2	4 3	3 2	4 4	3 4	4 3	3 2	4 3	
	61.2	71.3	69.0	96.5	80.0	54.4	84.6	45.0	
	166.0	166.0	86.0	153.0	153.0	128.0	193.0	106.0	
	17.0	26.0	45.0	45.0	21.0	0.0	7.0	7.0	
	38.3	32.2			43.8	47.3	59.4	29.5	
	17	15	4	4	8	5	20	7	
T(X)	117.7-	130.6-	130.0-	225.5-	173.9-	107.4-	199.3-	80.7-	
	7.0	24.0-	54.0-	59.0-	16.0-	0.0	7.0-	7.0-	
	437.0-	354.0-	187.0-	368.0-	400.0-	332.0-	513.0-	280.0-	
	113.6	85.9			132.1	127.1	167.5	86.2	
T(Y)	40.3-	89.1-	76.7-	33.0-	83.9-	66.0-	57.8-	17.6-	
	41.0	1.0-	32.0-	79.0	16.0-	0.0	89.0	0.0	
	103.0-	303.0-	110.0-	217.0-	150.0-	141.0-	257.0-	52.0-	
	62.1	65.3			50.4	57.5	90.1	18.8	

MAY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.9-	3.1-	4.8-	5.2-	6.5-	4.8-	6.5-	4.4-	
	0.1	1.7	2.2-	1.0	2.4-	2.4-	1.9-	0.4-	
	8.2-	7.0-	6.3-	8.2-	10.1-	8.7-	9.6-	8.1-	
	3.2	2.9		2.9	1.8	2.0	2.6	1.8	
W(Y)	0.6-	3.3-	2.7-	0.6-	1.6-	0.8-	1.6-	0.6-	
	9.3	3.9	1.3	3.9	1.0	2.3	3.1	7.1	
	9.3-	9.1-	5.3-	9.2-	4.3-	3.2-	3.6-	3.7-	
	5.6	3.7		3.9	1.5	1.8	2.0	2.6	
WSQ	3 3	3 3	4 3	4 4	3 3	3 3	3 3	4 2	
	57.2	42.6	41.0	50.7	50.7	30.4	56.0	29.2	
	117.0	86.0	68.0	96.0	106.0	86.0	106.0	68.0	
	9.0	1.0	7.0	1.0	7.0	7.0	4.0	4.0	
	38.0	31.9		26.9	24.9	26.3	35.3	18.6	
	16	11	4	8	18	10	12	26	
T(X)	76.2-	31.3-	61.7-	72.9-	91.3-	52.8-	118.0-	37.1-	
	2.0	40.0	6.0-	1.0	7.0-	7.0-	4.0-	1.0-	
	243.0-	165.0-	109.0-	143.0-	280.0-	203.0-	267.0-	141.0-	
	93.8	57.9		44.9	76.3	67.7	96.8	35.0	
T(Y)	41.6-	63.6-	47.7-	30.0-	22.6-	14.9-	31.0-	0.2-	
	217.0	24.0	4.0	24.0	8.0	12.0	72.0	123.0	
	217.0-	213.0-	93.0-	237.0-	76.0-	76.0-	100.0-	32.0-	
	117.8	83.3		83.4	22.2	28.3	47.6	30.5	

JUNE 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.1-	2.4-	3.0-	5.3-	5.2-	6.4-	6.0-	4.5-	
	4.0	4.4	2.2-	2.0-	2.4-	1.5-	0.0	0.0	
	8.7-	8.1-	4.6-	8.9-	8.2-	10.2-	10.3-	7.3-	
	3.3	2.8	1.0	1.5	2.2	2.3	2.2	2.8	
W(Y)	0.2-	0.7-	3.4	0.5-	0.5	2.5-	1.6-	3.3	
	5.3	3.9	5.8	5.9	7.2	0.0	3.1	7.2	
	5.1-	4.3-	0.0	6.0-	4.1-	8.7-	5.3-	0.0	
	3.4	2.5	2.3	3.9	2.7	2.5	2.6	2.1	
WSQ	3 3	3 3	2 3	3 3	3 4	3 2	3 3	1 2	
	31.6	20.4	26.7	45.8	40.3	58.7	50.1	44.3	
	36.0	68.0	38.0	106.0	68.0	179.0	106.0	60.0	
	0.0	0.0	10.0	7.0	7.0	21.0	0.0	0.0	
	21.5	18.3	10.4	21.8	23.6	40.4	26.8	23.4	
	22	17	7	17	11	12	28	6	
T(X)	35.8-	20.7-	17.9-	61.1-	59.9-	101.5-	87.1-	58.8-	
	24.0	27.0	9.0-	6.0-	7.0-	8.0-	0.0	0.0	
	203.0-	141.0-	25.0-	245.0-	143.0-	385.0-	285.0-	101.0-	
	51.4	34.9	5.0	50.4	46.3	98.6	72.1	41.0	
T(Y)	3.6-	3.6-	24.3	6.2-	5.0	49.2-	22.9-	41.5	
	43.0	24.0	46.0	81.0	100.0	0.0	72.0	100.0	
	76.0-	40.0-	0.0	145.0-	69.0-	329.0-	93.0-	0.0	
	28.5	18.4	19.5	57.4	38.6	89.4	39.7	30.7	

JULY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.2-	0.1	2.2-	3.3-	3.5-	1.4-	7.2-	4.5-	
	6.8	5.1	4.4	1.3	0.5	2.9	1.8-	3.0-	
	3.9-	4.2-	5.1-	6.4-	10.1-	7.2-	13.9-	5.8-	
	2.3	2.3	2.9	2.6	2.5	2.6	3.2		
W(Y)	1.2	3.2	2.8	3.7	2.1	2.2	0.3	0.2-	
	7.7	8.1	7.2	6.1	7.6	5.3	10.6	3.5	
	3.9-	3.1-	3.3-	0.6	2.6-	3.6-	6.7-	2.2-	
	2.9	3.0	3.3	2.0	3.2	3.3	3.9		
WSQ	3 3	3 3	2 2	3 3	3 4	3 3	3 2	2 3	
	15.6	24.2	32.2	35.0	33.8	23.9	77.8	28.3	
	68.0	68.0	60.0	68.0	106.0	60.0	193.0	38.0	
	0.0	0.0	2.0	4.0	4.0	2.0	10.0	21.0	
	17.4	17.8	21.5	24.0	24.7	16.1	58.7		
	27	18	9	7	22	11	22	3	
T(X)	2.0-	3.0-	23.0-	40.7-	38.4-	14.2-	162.6-	30.7-	
	76.0	32.0	27.0	3.0	1.0	16.0	7.0-	16.0-	
	54.0-	73.0-	69.0-	110.0-	280.0-	100.0-	548.0-	46.0-	
	21.8	21.7	30.6	44.8	56.9	29.7	169.3		
T(Y)	10.7	29.2	33.0	40.9	22.9	12.9	7.4	3.0-	
	134.0	141.0	100.0	91.0	105.0	43.0	417.0	19.0	
	27.0-	11.0-	21.0-	2.0	52.0-	37.0-	192.0-	17.0-	
	32.0	39.0	40.9	35.9	37.1	24.0	113.4		

AUGUST 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.1	1.3-	3.6-	4.3-	4.6-	4.0-	2.9-	4.6-	
	6.7	2.7	0.9-	0.1-	1.8	1.8-	3.1	1.8-	
	5.4-	4.2-	7.1-	8.5-	8.7-	6.7-	7.8-	7.6-	
	3.3	2.1	2.1	2.8	3.3	1.6	2.8	2.2	
W(Y)	4.3	5.4	4.3	5.6	1.6	2.0	1.9	3.6	
	9.6	10.3	6.3	9.1	6.9	4.9	7.6	5.2	
	0.9-	0.0	2.3	0.7-	3.7-	6.3-	4.0-	1.0	
	2.8	2.9	1.6	2.4	3.7	3.3	3.0	1.8	
WSQ	4 3	4 2	2 3	2 4	3 3	2 3	3 3	1 2	
	38.9	43.9	37.8	64.0	48.0	33.9	28.8	43.0	
	106.0	106.0	86.0	106.0	117.0	60.0	68.0	77.0	
	0.0	0.0	13.0	13.0	4.0	10.0	0.0	4.0	
	30.5	28.9	28.5	33.5	39.2	19.9	23.7	29.2	
	34	15	6	12	11	8	31	6	
T(X)	15.7	9.9-	50.5-	85.7-	80.9-	37.7-	31.0-	66.5-	
	138.0	48.0	6.0-	1.0-	4.0	7.0-	18.0	4.0-	
	100.0-	73.0-	167.0-	220.0-	246.0-	93.0-	135.0-	158.0-	
	50.8	29.8	60.3	89.9	95.3	31.0	41.9	56.3	
T(Y)	61.4	78.5	52.7	105.5	33.1	16.0	24.2	49.8	
	267.0	285.0	138.0	217.0	203.0	68.0	105.0	91.0	
	3.0-	0.0	9.0	3.0-	76.0-	70.0-	32.0-	2.0	
	73.7	74.2	51.2	76.6	85.8	39.0	37.1	36.8	

SEPTEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.2-	2.2-	2.8-	2.1-	3.9-	4.5-	5.2-	3.6-	
	3.8	0.9	0.5	8.9	1.3-	1.6-	0.9-	0.0	
	3.7-	10.3-	8.0-	6.6-	7.1-	7.7-	9.8-	5.7-	
	2.0	2.7	2.8	4.0	1.8	2.1	2.4	2.3	
W(Y)	4.1	5.1	4.5	1.1	2.5	3.2	1.3	0.5	
	12.9	12.5	9.4	8.7	8.9	5.1	9.8	4.6	
	9.6-	0.1-	1.5	8.1-	2.3-	0.1-	8.7-	4.9-	
	4.9	3.1	2.4	5.2	2.7	1.8	4.5	2.6	
WSQ	2 3	2 3	3 3	3 3	3 4	2 2	3 3	2 2	
	44.4	48.1	41.7	48.7	31.7	38.4	55.1	25.1	
	166.0	179.0	153.0	106.0	106.0	60.0	166.0	52.0	
	0.0	7.0	2.0	7.0	2.0	21.0	2.0	0.0	
	48.1	48.4	45.6	31.6	31.8	15.2	42.8	16.5	
	16	14	9	15	12	5	22	8	
T(X)	9.5	43.5-	54.7-	7.3-	42.7-	45.2-	93.5-	27.6-	
	118.0	7.0	1.0	245.0	2.0-	9.0-	2.0-	0.0	
	26.0-	285.0-	278.0-	107.0-	167.0-	107.0-	303.0-	62.0-	
	38.6	82.5	89.5	81.8	53.1	34.9	90.9	20.0	
T(Y)	62.6	81.8	67.6	24.2	40.3	23.8	24.5	5.1	
	466.0	474.0	325.0	205.0	245.0	47.0	354.0	51.0	
	267.0-	2.0-	2.0	189.0-	9.0-	1.0-	273.0-	35.0-	
	154.7	131.7	97.1	105.2	72.0	15.7	116.3	22.2	

OCTOBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.3-	2.6-	2.5-	5.4-	4.1-	4.0-	4.6-	2.1-	
	0.0	1.6	0.9	1.3-	1.4	0.3	0.0	1.5	
	6.3-	7.7-	6.1-	10.1-	8.6-	9.6-	9.9-	7.7-	
	1.9	2.5	2.0	2.3	2.9	3.5	2.6	2.9	
W(Y)	0.8	2.2	1.5	0.1	0.7	0.1-	1.0	0.6	
	5.1	6.1	5.8	7.7	8.1	7.4	11.1	4.6	
	7.3-	5.3-	3.0	3.1-	5.5-	4.4-	2.9-	2.3-	
	4.1	3.2	2.0	3.0	3.4	3.2	2.6	2.4	
WSQ	3 3	3 3	4 2	4 4	3 3	3 3	3 3	3 3	
	31.4	27.9	16.3	43.6	37.1	38.5	35.6	19.1	
	68.0	68.0	38.0	106.0	79.0	96.0	166.0	60.0	
	0.0	2.0	1.0	2.0	0.0	0.0	0.0	0.0	
	18.6	17.6	15.6	26.0	22.2	33.1	35.3	17.7	
	17	14	6	16	33	13	36	8	
T(X)	30.8-	25.7-	14.3-	68.6-	43.9-	66.5-	56.9-	19.6-	
	0.0	5.0	1.0	2.0-	24.0	0.0	0.0	4.0	
	109.0-	109.0-	49.0-	280.0-	185.0-	247.0-	308.0-	107.0-	
	31.0	34.9	16.4	72.3	43.6	78.9	72.1	34.7	
T(Y)	5.6-	8.9	10.2	0.3-	9.1	7.9-	18.4	4.2	
	38.0	49.0	46.0	134.0	141.0	101.0	402.0	25.0	
	101.0-	93.0-	0.0	52.0-	47.0-	92.0-	40.0-	10.0-	
	45.4	33.0	16.2	42.0	41.3	46.9	72.5	12.4	

NOVEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.9-	5.9-	6.5-	6.9-	5.5-	2.9-	8.2-	4.1-	
	0.9-	1.4-	0.0	3.1-	0.5-	2.0-	3.9-	3.4-	
	14.5-	9.6-	12.1-	12.1-	12.9-	3.3-	13.0-	4.9-	
	4.0	2.9	4.9	2.8	2.9		2.0		
W(Y)	0.7	0.8-	2.0-	0.1-	0.3	2.1-	0.2-	1.4	
	4.9	7.2	1.4	3.4	6.2	1.6	6.9	1.7	
	5.4-	10.2-	6.5-	4.5-	5.1-	4.0-	7.9-	1.2	
	3.6	4.1	2.8	2.4	3.0		4.0		
WSQ	3 3	4 3	5 3	4 3	3 3	4 2	3 3	2 1	
	76.5	61.2	78.2	61.6	48.0	19.7	88.2	19.5	
	238.0	106.0	166.0	166.0	166.0	26.0	193.0	26.0	
	7.0	17.0	0.0	11.0	10.0	7.0	17.0	13.0	
	83.9	32.8	68.3	47.5	38.8		41.2		
	17	21	6	9	20	3	13	2	
T(X)	173.2-	108.9-	186.3-	133.9-	89.2-	15.3-	197.3-	22.0-	
	3.0-	7.0-	0.0	11.0-	2.0-	6.0-	18.0-	14.0-	
	638.0-	267.0-	437.0-	437.0-	466.0-	20.0-	513.0-	30.0-	
	188.4	99.2	176.2	139.4	113.1		117.5		
T(Y)	30.9-	36.9-	67.8-	17.8-	1.4	14.3-	10.0-	8.0	
	68.0	100.0	30.0	48.0	81.0	5.0	203.0	11.0	
	259.0-	281.0-	237.0-	163.0-	76.0-	24.0-	220.0-	5.0	
	86.3	78.9	97.8	60.2	37.1		116.5		

DECEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.1-	6.4-	3.7-	5.7-	6.9-	6.0-	7.7-	6.9-	
	0.1-	4.1	3.1	0.9-	4.0-	2.7-	4.9-	3.3-	
	8.6-	13.7-	10.1-	11.2-	9.3-	10.8-	10.6-	8.2-	
	2.8	4.8	3.6	3.0	1.6	2.3	1.6	2.0	
W(Y)	0.9	1.2-	0.0-	1.6	1.0-	0.1-	2.1-	0.3-	
	8.7	8.2	5.3	8.2	5.9	3.8	1.7	3.9	
	7.4-	7.1-	7.1-	4.9-	4.4-	6.0-	7.5-	3.1-	
	5.1	5.0	4.4	3.5	2.6	3.1	2.4	2.6	
WSQ	3 2	3 3	3 3	3 3	3 3	2 2	3 3	1 2	
	50.7	90.6	46.1	55.9	58.3	51.4	72.3	58.9	
	128.0	193.0	117.0	125.0	86.0	117.0	128.0	77.0	
	7.0	17.0	4.0	7.0	21.0	10.0	26.0	26.0	
	31.3	45.9	32.3	33.5	22.4	30.7	28.7	18.9	
	22	22	11	18	12	12	18	9	
T(X)	64.4-	183.5-	68.0-	100.1-	111.7-	94.7-	149.3-	113.7-	
	1.6-	19.0	15.0	3.0-	22.0-	10.0-	30.0-	21.0-	
	259.0-	539.0-	299.0-	344.0-	217.0-	319.0-	314.0-	170.0-	
	76.7	172.6	92.9	103.1	67.9	87.5	90.9	55.3	
T(Y)	5.3	53.9-	20.2-	17.7	17.7-	12.3-	47.1-	17.4-	
	2.3-	143.0	43.0	170.0	81.0	53.0	30.0	24.0	
	230.0-	167.0-	167.0-	88.0-	92.0-	141.0-	194.0-	63.0-	
	95.0	98.9	64.0	59.4	46.7	50.2	61.2	32.5	

JANUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.4-	4.6-	9.7-	6.4-	5.2-	4.7-	6.7-	6.7-	
	0.1	2.0	3.9-	5.2-	3.0-	0.9-	3.4-		
	14.5-	9.7-	18.4-	7.6-	9.7-	7.1-	12.9-		
	3.8	3.4	5.1		2.4	1.8	2.4		
W(Y)	2.6-	2.2-	1.0-	3.4-	0.7-	1.7	0.6-	5.7-	
	3.8	3.4	6.5	1.4-	0.7	5.1	6.7		
	10.3-	10.6-	6.5-	5.5-	2.7-	2.2-	9.7-		
	3.7	3.7	3.7		1.3	2.4	4.2		
WSQ	3 2	3 3	4 3	4 3	3 4	3 3	3 2	5 4	
	65.0	50.7	135.0	57.3	35.1	34.0	68.5	77.0	
	238.0	117.0	383.0	60.0	102.0	52.0	166.0		
	7.0	10.0	17.0	54.0	10.0	21.0	26.0		
	74.5	42.2	126.1		32.3	9.2	35.3		
	15	9	7	3	7	11	21	1	
T(X)	119.5-	67.8-	338.0-	83.3-	67.7-	37.3-	124.9-	138.0-	
	2.0	58.0	18.0-	68.0-	11.0-	6.0-	31.0-		
	638.0-	268.0-	1043.0-	105.0-	262.0-	79.0-	466.0-		
	193.8	109.8	364.1		87.6	19.1	115.5		
T(Y)	69.7-	40.9-	6.3	43.7-	12.4-	11.8	22.7-	118.0-	
	53.0	95.0	368.0	19.0-	3.0	47.0	138.0		
	442.0-	214.0-	237.0-	72.0-	71.0-	17.0-	268.0-		
	133.7	107.2	166.5		24.5	19.0	82.2		

FEBRUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.6-	6.4-	6.5-	6.6-	7.1-	8.7-	8.0-	8.1-	
	2.3-	2.3-	4.8-	2.2-	0.0	2.7-	0.9-	3.9-	
	10.1-	9.8-	8.6-	11.6-	10.1-	12.1-	17.0-	10.1-	
	2.5	2.4	1.0	2.6	2.8	2.4	4.1		
W(Y)	2.7-	2.5-	1.5-	2.2-	1.6-	2.7-	6.0-	4.6-	
	2.7	2.7	4.9	9.6	3.5	3.0	5.2	1.9-	
	6.0-	8.4-	7.4-	9.6-	8.8-	8.4-	17.0-	7.4-	
	2.9	3.6	5.2	5.2	3.0	2.8	4.7		
WSQ	2 2	3 2	4 3	4 3	4 4	4 2	3 4	2 1	
	53.8	66.3	71.7	82.1	70.0	97.8	139.7	97.0	
	117.0	166.0	128.0	153.0	111.0	166.0	325.0	128.0	
	10.0	13.0	26.0	7.0	0.0	10.0	32.0	26.0	
	39.5	50.8	27.6	42.8	37.0	44.6	75.8		
	9	7	8	17	14	10	21	4	
T(X)	104.8-	126.1-	123.4-	153.4-	150.8-	233.5-	272.8-	219.5-	
	10.0-	10.0-	30.0-	6.0-	0.0	9.0-	7.0-	24.0-	
	239.0-	354.0-	269.0-	400.0-	284.0-	437.0-	828.0-	305.0-	
	96.0	115.2	69.4	106.4	106.7	117.6	208.0		
T(Y)	63.3-	77.9-	91.5-	57.2-	36.6-	80.0-	195.0-	120.7-	
	11.0	11.0	68.0	267.0	101.0	58.0	91.0	21.0-	
	141.0-	303.0-	230.0-	257.0-	247.0-	313.0-	880.0-	230.0-	
	64.7	111.2	108.4	145.2	76.4	94.4	206.4		

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.5-	7.9-		10.1-	7.2-	9.6-	5.6-		
	4.8-	3.6-		9.2-	3.8-	7.1-	2.0-		
	10.1-	11.1-		11.1-	11.3-	12.7-	10.1-		
	1.6	2.5		0.6	1.6		2.5		
W(Y)	6.9-	5.6-		2.1-	3.7-	3.9-	4.4-		
	3.8-	1.7-		1.9-	0.1-	2.3-	0.1-		
	9.5-	10.2-		3.0-	7.1-	5.2-	11.2-		
	1.5	2.7		0.4	2.0		3.5		
WSQ	4 4	3 1		4 3	3 3	2 2	3 3		
	109.1	106.9		107.1	72.5	113.3	69.9		
	153.0	153.0		128.0	128.0	166.0	166.0		
	80.0	52.0		91.0	32.0	68.0	4.0		
	29.0	36.1		12.0	19.6		51.4		
	12	8	0	7	35	3	19	0	
T(X)	209.5-	214.9-		281.6-	138.5-	275.3-	118.1-		
	81.0-	61.0-		229.0-	37.0-	123.0-	5.0-		
	325.0-	368.0-		348.0-	354.0-	458.0-	299.0-		
	78.4	115.5		39.5	70.5		101.0		
T(Y)	193.4-	150.7-		58.6-	69.1-	101.0-	110.8-		
	69.0-	40.0-		52.0-	1.0-	73.0-	1.0-		
	330.0-	301.0-		77.0-	185.0-	145.0-	406.0-		
	71.4	100.3		8.5	46.8		129.2		

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.5	5.1-	0.6-	7.8-	6.2-	6.6-	8.1-	5.5-	
	6.3	2.9	0.5-	5.5-	3.0-	2.0-	5.8-		
	7.7-	8.6-	0.7-	9.6-	9.1-	8.7-	12.1-		
	5.0	3.6		1.4	1.8	2.2	1.7		
W(Y)	1.8-	5.3-	3.2	4.4-	1.3-	1.3-	3.2-	4.7-	
	6.0	1.0-	4.0	1.4-	3.5	1.6	4.3		
	7.8-	7.4-	2.5	7.2-	7.4-	3.2-	7.4-		
	4.8	2.3		1.8	3.2	1.8	2.6		
WSQ	3 2	2 3	1 2	4 3	4 4	3 3	3 2	1 4	
	51.9	72.4	12.0	85.7	53.2	53.2	86.7	52.0	
	68.0	128.0	17.0	122.0	128.0	86.0	166.0		
	17.0	7.0	7.0	52.0	18.0	7.0	38.0		
	16.7	46.8		26.7	34.6	25.4	34.6		
	7	10	2	7	12	6	14	1	
T(X)	5.1-	131.9-	2.5-	175.4-	94.3-	101.0-	187.6-	61.0-	
	68.0	10.0	1.0-	61.0-	16.0-	6.0-	46.0-		
	134.0-	269.0-	4.0-	274.0-	269.0-	203.0-	439.0-		
	68.6	108.4		83.2	85.3	64.2	107.8		
T(Y)	32.3-	120.8-	13.0	101.1-	37.2-	28.7-	68.6-	52.0-	
	83.0	4.0-	19.0	19.0-	36.0	5.0	156.0		
	135.0-	230.0-	7.0	217.0-	230.0-	76.0-	230.0-		
	67.4	88.7		65.4	79.3	31.3	84.4		

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	8.1-	7.5-	7.7-	8.7-	7.2-	6.9-	5.9-	6.9-	
	6.3-	6.3-	7.7-	6.3-	4.8-	5.1-	2.4-	6.7-	
	9.8-	8.4-	7.7-	10.3-	10.1-	8.7-	10.6-	7.2-	
	1.1	0.5			1.7		1.9		
W(Y)	4.1-	3.4-	2.9-	2.2-	1.7-	2.0-	3.4-	2.6-	
	2.3-	0.1-	2.9-	1.9	0.1-	0.9-	1.3	2.5-	
	8.4-	8.7-	2.9-	5.3-	2.7-	3.2-	7.9-	2.7-	
	2.3	2.1			1.0		3.0		
WSQ	3 3	3 3	4 3	5 3	4 4	3 1	3 2	3 2	
	89.4	73.1	68.0	92.7	59.2	56.0	59.6	56.0	
	166.0	128.0	68.0	117.0	102.0	86.0	153.0	60.0	
	45.0	52.0	68.0	68.0	26.0	26.0	7.0	52.0	
	42.7	19.3			24.5		39.6		
	9	13	4	3	8	2	21	2	
T(X)	162.2-	138.0-	134.0-	217.3-	116.2-	117.0-	100.5-	87.5-	
	58.0-	80.0-	134.0-	109.0-	30.0-	31.0-	7.0-	75.0-	
	354.0-	225.0-	134.0-	306.0-	274.0-	203.0-	368.0-	100.0-	
	101.9	43.1			83.5		96.1		
T(Y)	106.0-	71.5-	50.0-	47.3-	19.0-	41.0-	71.7-	32.5-	
	22.0-	1.0-	50.0-	46.0	2.0-	6.0-	18.0	28.0-	
	303.0-	273.0-	50.0-	95.0-	37.0-	76.0-	230.0-	37.0-	
	106.6	68.1			14.7		85.0		

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.9-	6.5-	7.1-	7.6-	6.6-	7.6-	8.2-	6.6-	
	0.3	2.7-	4.7-	2.6-	3.1-		3.9-	3.9-	
	8.6-	8.2-	11.9-	11.6-	10.0-		11.7-	12.4-	
	2.5		3.3	2.5	2.2		2.3		
W(Y)	4.6-	4.5-	2.3-	1.1-	3.5-	1.4-	4.7-	3.0-	
	1.0	7.2	0.9-	6.3	0.0		0.0	0.1-	
	9.6-	9.5-	4.3-	8.0-	9.3-		10.0-	6.9-	
	3.0		1.1	3.9	2.7		2.7		
WSQ	4 2	3 2	3 3	3 3	3 4	4 1	3 2	4 4	
	52.1	114.5	67.5	81.2	69.0	60.0	102.5	70.2	
	128.0	153.0	153.0	153.0	148.0		238.0	153.0	
	1.0	60.0	23.0	7.0	10.0		26.0	32.0	
	34.2		59.8	44.1	46.6		59.0		
	17	4	6	12	10	1	11	4	
T(X)	62.8-	194.2-	154.3-	175.7-	134.9-	105.0-	222.0-	139.7-	
	1.0	37.0-	27.0-	7.0-	11.0-		24.0-	34.0-	
	269.0-	272.0-	409.0-	400.0-	324.0-		518.0-	427.0-	
	69.8		176.9	118.6	110.4		143.4		
T(Y)	78.5-	177.5-	50.2-	48.1-	86.1-	19.0-	137.7-	36.5-	
	8.0	100.0	5.0-	109.0	0.0		0.0	4.0-	
	248.0-	330.0-	150.0-	278.0-	317.0-		442.0-	108.0-	
	79.4		58.5	105.8	98.2		126.1		

JULY 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.1-	7.0-	6.1-	7.3-	7.1-	8.0-	9.8-	6.3-	
	0.9	4.0-	5.9-	5.8-	5.6-	5.1-	8.2-		
	8.7-	8.2-	6.2-	9.8-	9.6-	11.6-	11.0-		
	2.5	1.6		1.1	1.4	2.2	0.9		
W(Y)	3.5-	1.9-	4.5-	2.3-	2.8-	2.1-	6.0-	5.3-	
	0.0	0.1-	3.7-	1.0	0.0	0.4	3.6-		
	7.9-	7.0-	7.1-	7.9-	4.7-	4.3-	9.4-		
	2.5	2.7		2.6	1.6	1.7	2.2		
WSC	3 3	4 2	3 4	4 4	4 4	5 2	4 3	1 1	
	51.0	62.2	60.5	67.1	62.5	75.1	137.6	68.0	
	128.0	117.0	86.0	106.0	106.0	153.0	208.0		
	2.0	21.0	52.0	38.0	32.0	26.0	106.0		
	34.8	31.7		21.8	26.2	43.3	36.9		
	21	5	4	17	8	7	5	1	
T(X)	82.8-	115.4-	86.2-	125.6-	120.7-	159.3-	318.8-	109.0-	
	3.0	22.0-	69.0-	46.0-	39.0-	31.0-	243.0-		
	269.0-	243.0-	138.0-	251.0-	267.0-	400.0-	449.0-		
	77.7	75.7		61.5	80.6	134.3	72.2		
T(Y)	58.2-	44.6-	72.5-	49.4-	53.9-	50.6-	200.2-	93.0-	
	0.0	1.0-	41.0-	8.0	0.0	2.0	100.0-		
	230.0-	207.0-	167.0-	220.0-	110.0-	150.0-	384.0-		
	75.1	81.3		69.6	43.4	56.5	101.6		

AUGUST 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.1-	4.4-	5.5-	6.5-	6.4-	7.7-	5.5-	6.0-	
	1.9-	0.0	0.0	4.3-	5.9-	4.8-	0.0	4.1-	
	8.2-	6.7-	10.6-	8.8-	7.1-	10.6-	7.7-	7.7-	
	2.2	2.4	2.7	1.3		1.7	2.0		
W(Y)	1.6-	3.7-	4.5-	4.7-	4.8-	1.0-	0.9-	0.1-	
	0.0	0.0	0.0	0.1-	4.2-	1.7	0.5	0.0	
	4.2-	8.2-	8.1-	7.6-	5.3-	5.2-	5.0-	0.1-	
	1.6	2.2	2.3	1.7		1.6	1.6		
WSC	2 3	2 3	3 3	3 2	4 3	4 3	3 2	4 2	
	46.7	44.3	62.6	68.7	65.3	65.7	37.8	38.3	
	68.0	77.0	128.0	86.0	68.0	111.0	60.0	60.0	
	4.0	0.0	0.0	38.0	60.0	26.0	0.0	17.0	
	26.3	23.8	33.5	12.9		27.0	18.0		
	7	12	18	11	3	15	10	3	
T(X)	86.0-	55.2-	103.4-	117.6-	104.3-	137.1-	53.5-	58.3-	
	4.0-	0.0	0.0	38.0-	81.0-	30.0-	0.0	19.0-	
	143.0-	109.0-	332.0-	187.0-	123.0-	302.0-	107.0-	107.0-	
	56.5	36.3	90.9	46.5		89.2	30.3		
T(Y)	25.1-	50.3-	79.5-	82.0-	78.3-	17.1-	11.1-	0.3-	
	0.0	0.0	0.0	2.0-	69.0-	11.0	0.0	0.0	
	73.0-	171.0-	207.0-	158.0-	93.0-	145.0-	69.0-	1.0-	
	29.1	46.3	61.9	39.3		35.6	20.9		

SEPTEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.3-	3.2-	2.6-	3.4-	4.9-	6.4-	6.6-	7.3-	
	2.4	0.0	1.3-	1.7-	4.8-	3.9-	0.8-	2.5-	
	10.8-	8.7-	3.9-	5.9-	5.1-	10.8-	10.3-	9.5-	
	3.8	3.5	0.9	1.7	0.1	2.0	2.4	1.9	
W(Y)	3.1-	1.0-	3.0-	3.5-	1.3-	2.1-	1.5-	1.8-	
	0.0	3.0	1.1-	0.0	0.0	1.7	2.7	1.1	
	7.6-	3.2-	4.9-	5.8-	1.8-	5.7-	4.6-	4.5-	
	2.3	2.1	1.4	1.8	0.7	2.0	1.8	1.8	
WSC	3 2	3 3	3 3	3 3	3 4	4 3	4 3	4 3	
	40.2	27.7	18.3	30.0	26.0	53.1	55.7	63.2	
	117.0	86.0	26.0	60.0	26.0	128.0	106.0	91.0	
	2.0	0.0	4.0	10.0	26.0	26.0	21.0	26.0	
	35.8	34.5	9.1	14.0	0.0	31.8	25.4	20.2	
	17	7	7	12	6	19	14	13	
T(X)	63.4-	56.3-	13.3-	26.6-	30.5-	96.6-	109.1-	127.1-	
	7.0	0.0	3.0-	10.0-	30.0-	24.0-	4.0-	16.0-	
	319.0-	203.0-	24.0-	81.0-	32.0-	319.0-	285.0-	234.0-	
	87.7	83.0	7.4	22.1	0.8	96.5	79.7	66.5	
T(Y)	40.9-	20.7-	16.4-	27.3-	8.3-	30.2-	14.5-	27.1-	
	0.0	10.0	4.0-	0.0	0.0	11.0-	48.0	10.0	
	185.0-	76.0-	30.0-	69.0-	11.0-	130.0-	63.0-	92.0-	
	55.1	31.7	10.4	18.3	4.1	44.1	24.2	29.7	

OCTOBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.3-	5.7-	4.4-	4.3-	7.0-	6.9-	4.5-	6.4-	
	4.4	2.7-	3.1-	2.1	4.8-	1.8-	7.7	1.9	
	9.3-	9.6-	8.2-	7.4-	8.2-	10.2-	8.7-	12.7-	
	5.0	2.2		3.6	1.1	2.3	4.3	3.4	
W(Y)	2.9-	3.3-	4.5-	3.1-	4.1-	2.5-	1.4-	0.7-	
	2.6	0.0	2.7-	0.0	1.8-	4.8	3.5	0.8	
	6.7-	7.8-	9.9-	4.4-	7.0-	7.9-	5.7-	2.5-	
	2.9	2.7		1.6	1.9	3.3	3.2	1.0	
WSC	3 3	4 3	5 3	4 3	3 3	4 3	2 2	4 3	
	53.4	55.4	54.2	43.0	69.7	70.7	51.7	54.8	
	117.0	117.0	166.0	74.0	117.0	128.0	86.0	166.0	
	7.0	10.0	17.0	4.0	26.0	7.0	17.0	4.0	
	40.8	36.1		27.3	29.7	32.8	21.9	42.0	
	11	10	4	5	7	18	10	13	
T(X)	91.0-	96.3-	85.2-	67.8-	127.4-	142.2-	58.3-	116.8-	
	27.0	9.0-	15.0-	5.0	30.0-	6.0-	134.0	4.0	
	275.0-	267.0-	296.0-	148.0-	243.0-	231.0-	203.0-	458.0-	
	111.0	92.7		56.6	74.0	89.8	84.1	122.8	
T(Y)	63.5-	64.9-	99.7-	42.0-	83.4-	58.6-	24.3-	14.2-	
	16.0	0.0	13.0-	0.0	11.0-	47.0	50.0	5.0	
	185.0-	207.0-	360.0-	87.0-	207.0-	230.0-	118.0-	85.0-	
	71.0	67.9		31.0	72.8	79.4	50.2	23.6	

NOVEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.1-	4.6-	3.5-	6.1-	5.0-	7.6-	7.1-	7.7-	
	1.8	1.5	1.5-	3.4-	1.1	4.3-	3.7-	5.1-	
	9.8-	7.8-	5.6-	11.1-	13.5-	12.7-	11.6-	9.7-	
	3.3	2.6	1.2	2.0	4.5	1.7	2.2	1.6	
W(Y)	4.7-	1.4-	0.9-	3.7-	3.7-	2.5-	1.6-	0.6	
	0.8-	4.1	3.9	0.1-	0.1-	0.1-	1.3	3.4	
	8.7-	6.7-	4.4-	9.7-	8.2-	5.2-	4.3-	1.7-	
	2.3	3.1	2.2	2.4	3.2	1.3	1.7	1.7	
WSQ	4 2	2 3	3 3	4 3	4 2	3 3	3 3	4 3	
	54.1	39.4	19.2	60.8	69.5	68.1	60.3	65.8	
	128.0	106.0	32.0	128.0	208.0	166.0	153.0	106.0	
	1.0	2.0	2.0	26.0	2.0	37.0	21.0	26.0	
	47.9	30.8	10.3	27.6	64.5	28.0	37.0	27.3	
	11	12	5	14	10	17	10	11	
T(X)	114.3-	61.4-	19.2-	96.7-	128.1-	133.9-	120.0-	139.2-	
	4.0	3.0	3.0-	30.0-	4.0	40.0-	21.0-	32.0-	
	305.0-	217.0-	39.0-	348.0-	553.0-	458.0-	400.0-	268.0-	
	110.8	66.6	10.9	80.3	187.1	95.4	107.9	90.4	
T(Y)	98.7-	27.3-	4.7-	60.6-	79.1-	39.6-	30.4-	16.1	
	1.0-	70.0	24.0	1.0-	1.0-	2.0-	18.0	95.0	
	273.0-	185.0-	31.0-	268.0-	207.0-	85.0-	150.0-	40.0-	
	94.6	66.2	14.2	65.0	80.4	24.5	47.4	42.1	

DECEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.2-	6.5-	6.5-	6.9-	5.7-	6.7-	7.9-	5.0-	
	0.0	0.0	0.0	5.5-	4.1-	0.9	7.2-	4.4-	
	9.8-	11.1-	12.7-	10.6-	9.6-	11.6-	9.4-	5.9-	
	2.6	3.6	2.6	1.5	1.6	3.1	0.8		
W(Y)	5.1-	2.8-	2.3-	3.5-	1.0-	1.3-	1.1-	4.3-	
	0.0	0.0	4.9	0.1-	1.5	2.4	1.3	3.8-	
	7.3-	6.5-	5.3-	6.0-	4.7-	9.0-	8.0-	5.0-	
	1.9	2.1	3.2	2.1	1.8	2.6	3.5		
WSQ	3 2	2 3	3 3	4 3	5 4	4 3	2 1	1 3	
	63.5	67.4	64.9	66.5	39.0	63.0	76.2	44.0	
	128.0	166.0	166.0	128.0	106.0	193.0	153.0	60.0	
	0.0	0.0	17.0	38.0	17.0	7.0	52.0	34.0	
	27.8	50.2	29.1	24.6	25.6	52.1	38.7		
	19	16	20	12	14	17	5	3	
T(X)	96.6-	141.5-	117.5-	120.2-	64.7-	133.1-	142.4-	50.3-	
	0.0	0.0	0.0	49.0-	19.0-	2.0	80.0-	32.0-	
	305.0-	402.0-	458.0-	332.0-	267.0-	417.0-	325.0-	81.0-	
	85.8	133.3	95.2	81.3	71.0	137.9	92.7		
T(Y)	82.7-	60.3-	44.3-	62.5-	17.9-	42.6-	48.4-	43.0-	
	0.0	0.0	68.0	0.0	8.0	36.0	20.0	28.0-	
	180.0-	237.0-	93.0-	141.0-	110.0-	356.0-	278.0-	69.0-	
	42.8	73.5	43.4	48.3	36.5	91.8	115.1		

JANUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.2-	7.8-	7.8-	7.5-	8.7-	7.8-	8.0-	8.3-	
	6.3-	4.3-	4.9-	4.3-		2.5-	1.5-	0.0	
	7.7-	10.2-	9.3-	10.1-		13.0-	17.0-	15.4-	
	0.5	1.6	1.1	1.6		3.1	3.6	4.7	
W(Y)	4.0-	4.4-	4.2-	2.4-	3.2-	2.2-	2.2-	3.4-	
	0.1-	0.1-	3.1	3.1		1.7	1.7	0.1-	
	6.0-	11.1-	7.4-	6.7-		6.8-	7.4-	6.5-	
	2.1	2.7	3.2	2.7		2.6	2.7	2.0	
WSQ	2 2	2 3	3 3	4 2	5 1	4 4	3 3	2 2	
	73.6	89.7	90.4	72.2	86.0	82.7	89.2	106.2	
	86.0	208.0	128.0	106.0		193.0	289.0	238.0	
	60.0	45.0	52.0	45.0		7.0	2.0	9.0	
	8.9	40.0	23.9	24.9		57.7	71.3	82.2	
	5	19	14	8	1	12	22	17	
T(X)	138.6-	181.5-	185.1-	145.0-	203.0-	193.2-	205.2-	256.8-	
	107.0-	40.0-	68.0-	40.0-		7.0-	3.0-	0.0	
	165.0-	385.0-	269.0-	280.0-		513.0-	828.0-	681.0-	
	25.2	93.4	64.6	34.9		163.2	216.6	252.6	
T(Y)	83.8-	110.5-	104.1-	42.9-	76.0-	67.1-	57.2-	74.7-	
	1.0-	2.0-	72.0	72.0		11.0	11.0	6.0-	
	141.0-	456.0-	230.0-	185.0-		257.0-	230.0-	237.0-	
	45.5	109.7	94.4	67.7		81.9	75.7	72.5	

FEBRUARY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.8-	5.8-	5.8-	8.4-	8.0-	7.0-	8.6-	8.1-	
	1.7-	0.0	2.7-	1.1-	1.2-	0.0	6.3-	6.7-	
	9.6-	8.6-	8.9-	14.9-	14.7-	12.1-	12.1-	9.6-	
	2.0	2.6	2.2	3.8	2.6	2.9	1.6		
W(Y)	2.4-	2.9-	4.8-	4.2-	4.8-	3.5-	4.3-	3.7-	
	9.1	4.6	1.5-	0.1-	1.4-	0.0	2.3-	3.6-	
	6.4-	7.4-	8.3-	12.1-	10.7-	12.6-	7.4-	3.9-	
	3.9	4.0	2.2	2.8	2.0	3.3	1.7		
WSQ	3 2	2 3	3 3	3 3	3 3	4 3	2 2	1 2	
	72.6	65.0	67.0	109.2	97.2	81.1	99.0	83.0	
	106.0	128.0	128.0	221.0	271.0	201.0	166.0	106.0	
	38.0	0.0	21.0	26.0	13.0	0.0	45.0	60.0	
	21.9	36.8	31.7	58.4	54.5	57.3	34.8		
	12	10	17	20	36	33	9	2	
T(X)	131.2-	116.7-	110.4-	240.9-	208.1-	159.4-	221.6-	179.5-	
	40.0-	0.0	16.0-	20.0-	5.0-	0.0	58.0-	92.0-	
	267.0-	269.0-	269.0-	630.0-	624.0-	437.0-	437.0-	267.0-	
	75.6	90.7	80.8	195.6	150.5	138.3	106.8		
T(Y)	42.4-	58.9-	92.8-	97.8-	122.8-	99.2-	114.7-	77.0-	
	213.0	107.0	19.0-	5.0-	11.0-	0.0	22.0-	54.0-	
	163.0-	230.0-	246.0-	439.0-	505.0-	495.0-	230.0-	100.0-	
	90.2	98.4	77.6	92.2	95.2	128.5	67.3		

MARCH 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.4-	5.8-	5.9-	9.1-	7.8-	6.7-	6.5-	5.9-	
	0.1	3.0-	2.9-	3.1-	3.1-	3.1-	1.0-	1.9-	
	9.8-	8.1-	9.8-	14.4-	12.7-	10.6-	10.6-	7.7-	
	2.6	1.6	3.0	3.1	2.1	1.8	2.5	2.1	
W(Y)	4.8-	4.0-	4.3-	3.2-	1.8-	2.1-	2.2-	1.2-	
	2.4-	0.6-	1.3-	1.4	2.3	1.8	1.5	0.1-	
	8.4-	6.0-	8.4-	6.0-	8.7-	6.7-	7.4-	3.9-	
	1.4	1.7	2.4	1.8	3.0	1.6	2.2	1.5	
WSQ	4 3	3 3	3 3	4 3	3 3	3 2	3 3	4 2	
	73.8	54.1	67.8	106.2	78.5	55.5	58.2	43.7	
	166.0	86.0	166.0	208.0	166.0	128.0	128.0	60.0	
	21.0	10.0	13.0	17.0	36.0	13.0	1.0	4.0	
	28.0	19.2	61.9	52.4	31.5	28.4	37.6	21.4	
	23	17	15	26	24	26	18	6	
T(X)	136.6-	82.5-	135.1-	263.1-	165.5-	101.9-	116.1-	69.5-	
	0.0	10.0-	14.0-	15.0-	45.0-	13.0-	1.0-	4.0-	
	354.0-	187.0-	354.0-	591.0-	458.0-	332.0-	314.0-	107.0-	
	84.2	53.0	147.5	161.2	105.5	82.0	102.1	39.8	
T(Y)	92.0-	53.5-	100.1-	85.2-	45.3-	35.7-	46.2-	12.5-	
	13.0-	2.0-	5.0-	6.0	36.0	7.0	5.0	1.0-	
	303.0-	141.0-	303.0-	173.0-	205.0-	185.0-	230.0-	54.0-	
	56.1	33.5	116.6	54.4	70.1	40.9	63.6	19.3	

APRIL 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.0-	6.5-	7.0-	7.8-	9.5-	8.6-	8.4-	6.2-	
	2.6-	4.4-	3.5-	0.4-	6.3-	4.1-	4.0-	4.6-	
	7.7-	8.7-	11.1-	11.9-	12.4-	14.2-	12.7-	7.2-	
	1.4	1.2	1.8	2.8	1.7	2.4	2.6		
W(Y)	3.8-	4.0-	3.9-	3.8-	3.0-	2.8-	2.0-	1.9-	
	0.0	0.9-	0.1-	1.0-	1.9	1.6	2.3	0.8	
	9.0-	6.4-	6.0-	6.4-	8.7-	9.0-	5.0-	3.9-	
	2.2	1.1	1.4	1.6	2.6	2.7	2.2		
WSQ	3 3	3 3	3 3	4 3	3 3	3 3	3 2	1 1	
	56.6	61.5	69.6	85.8	109.1	94.7	85.8	47.0	
	106.0	86.0	140.0	157.0	157.0	208.0	166.0	60.0	
	7.0	26.0	17.0	7.0	68.0	32.0	21.0	21.0	
	22.3	18.7	27.7	41.2	23.4	46.3	43.8		
	11	21	19	18	15	32	17	3	
T(X)	82.6-	106.0-	131.2-	191.4-	267.6-	214.3-	201.9-	72.3-	
	7.0-	27.0-	17.0-	1.0-	109.0-	30.0-	22.0-	25.0-	
	140.0-	203.0-	365.0-	418.0-	437.0-	581.0-	458.0-	100.0-	
	36.1	57.1	90.7	124.2	82.5	142.4	136.5		
T(Y)	61.1-	64.2-	67.7-	83.4-	82.5-	76.0-	50.2-	29.0-	
	0.0	6.0-	2.0-	7.0-	58.0	20.0	53.0	4.0	
	248.0-	110.0-	145.0-	223.0-	273.0-	356.0-	150.0-	54.0-	
	62.8	32.3	40.3	58.2	74.8	84.6	54.0		

MAY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	8.8-	6.5-	5.8-	7.3-	8.7-	8.4-	6.2-	6.8-	
	7.0-	3.5-	1.7	4.6-	6.7-	5.6-	0.9-	0.4-	
	11.1-	9.8-	8.2-	10.6-	12.1-	12.4-	11.1-	9.6-	
	1.6	2.1	2.2	1.3	2.0	1.7	2.7	2.5	
W(Y)	6.4-	4.9-	3.8-	3.1-	3.6-	2.6-	1.1-	1.0-	
	3.6-	0.8-	4.9	0.0	1.4-	0.1-	3.9	5.5	
	8.4-	8.4-	7.0-	7.0-	8.8-	5.4-	5.0-	4.7-	
	1.5	2.6	2.9	2.3	2.0	1.7	2.7	2.9	
WSQ	3 3	3 3	3 4	3 3	3 3	3 2	3 3	3 2	
	123.1	77.6	61.3	69.9	97.3	83.6	53.7	62.2	
	166.0	166.0	117.0	117.0	166.0	153.0	128.0	106.0	
	36.0	17.0	13.0	21.0	52.0	32.0	7.0	9.0	
	37.7	55.1	29.9	26.7	38.0	32.2	32.7	29.7	
	7	8	18	19	19	16	23	12	
T(X)	267.4-	143.6-	97.9-	135.8-	218.8-	189.1-	103.7-	128.2-	
	165.0-	17.0-	11.0	25.0-	75.0-	39.0-	3.0-	9.0	
	402.0-	354.0-	243.0-	307.0-	437.0-	427.0-	348.0-	267.0-	
	96.0	128.1	74.2	78.5	124.1	107.6	98.1	82.8	
T(Y)	195.1-	118.7-	74.8-	64.2-	92.0-	58.8-	25.2-	22.7-	
	100.0-	5.0-	30.0	0.0	19.0-	3.0-	40.0	72.0	
	303.0-	303.0-	207.0-	237.0-	271.0-	156.0-	127.0-	117.0-	
	78.3	113.3	69.6	63.0	66.6	48.4	40.1	56.9	

JUNE 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.6-	5.2-	6.1-	7.3-	7.0-	7.8-	7.9-	5.7-	
	2.9	4.8	2.2-	2.4-	4.3-	1.9-	5.1-	5.3-	
	8.7-	13.2-	9.3-	10.6-	10.1-	11.6-	16.9-	6.3-	
	3.2	3.3	2.2	2.2	1.8	2.5	3.1	0.5	
W(Y)	4.2-	3.5-	4.5-	4.2-	3.9-	3.2-	4.0-	2.8-	
	0.0	2.2	1.3-	1.9	1.4	1.7	1.1	2.0-	
	7.7-	6.7-	7.0-	8.0-	6.7-	7.9-	9.0-	3.7-	
	2.2	2.4	1.6	2.3	1.9	2.5	2.6	0.6	
WSQ	4 2	2 3	4 3	3 3	3 3	3 2	2 2	3 2	
	54.0	56.6	65.1	80.9	71.5	83.7	94.6	41.0	
	106.0	179.0	117.0	153.0	117.0	154.0	325.0	52.0	
	10.0	13.0	7.0	7.0	32.0	4.0	38.0	32.0	
	28.8	39.1	36.3	36.5	22.7	42.5	72.8	6.9	
	11	17	19	17	20	24	13	5	
T(X)	102.4-	93.9-	124.7-	168.3-	139.6-	132.6-	198.3-	50.0-	
	50.0	30.0	6.0-	7.0-	30.0-	4.0-	43.0-	37.0-	
	217.0-	499.0-	275.0-	332.0-	299.0-	402.0-	874.0-	69.0-	
	85.2	116.3	85.4	100.0	79.1	122.6	216.6	11.8	
T(Y)	80.0-	48.7-	91.2-	96.5-	70.3-	80.0-	97.5-	25.4-	
	0.0	84.0	4.0-	32.0	24.0	47.0	10.0	14.0-	
	185.0-	185.0-	207.0-	278.0-	127.0-	253.0-	327.0-	41.0-	
	61.0	59.2	64.1	74.6	40.9	79.3	97.9	8.8	

JULY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3-	2.2-	5.6-	4.9-	6.7-	9.0-	8.3-	4.2-	
	6.8	3.9	3.3	0.7-	1.9-	4.8-	4.1-	3.6-	
	7.4-	7.4-	38.5-	10.6-	10.1-	14.0-	12.1-	4.8-	
	4.0	3.2	8.5	3.0	2.1	2.2	2.3		
W(Y)	3.1-	1.2-	3.7-	2.8-	2.1-	3.8-	4.1-	0.6-	
	8.2	4.9	0.8-	0.0	0.0	1.5	1.7	0.0	
	10.2-	6.4-	7.1-	6.5-	5.7-	8.4-	9.0-	1.8-	
	4.1	2.8	1.9	2.1	1.3	2.0	3.1		
WSQ	4 2	3 3	3 3	3 3	3 3	4 3	2 2	4 3	
	43.0	24.8	121.0	45.0	56.3	104.8	100.5	18.7	
	106.0	96.0	1531.0	117.0	106.0	223.0	193.0	26.0	
	0.0	0.0	2.0	4.0	4.0	26.0	17.0	13.0	
	36.4	29.6	342.8	35.9	26.3	45.1	54.4		
	21	17	18	23	20	29	13	3	
T(X)	16.9-	32.0-	290.5-	83.6-	106.8-	245.4-	218.9-	21.3-	
	140.0	24.0	21.0	2.0-	4.0-	29.0-	19.0-	15.0-	
	191.0-	191.0-	4385.0-	314.0-	280.0-	595.0-	437.0-	30.0-	
	82.6	59.0	994.5	93.6	73.9	134.1	141.7		
T(Y)	52.9-	21.6-	78.2-	39.8-	33.6-	105.7-	126.3-	3.7-	
	171.0	30.0	1.0-	0.0	0.0	9.0	11.0	0.0	
	281.0-	163.0-	813.0-	158.0-	118.0-	303.0-	356.0-	11.0-	
	93.8	50.6	180.9	49.0	27.4	73.9	111.3		

AUGUST 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.2-	2.7-	5.6-	6.3-	4.5-	6.1-	4.6-	6.3-	
	6.7	1.6-	0.7-	0.0	1.7-	1.9-	1.0		
	10.1-	4.3-	9.2-	15.7-	7.7-	9.8-	8.2-		
	5.7		2.4	3.6	2.0	2.2	2.3		
W(Y)	0.0	1.9-	1.7-	3.0-	3.8-	3.1-	1.3-	2.3-	
	3.9	1.6-	5.3	5.1	0.0	0.1-	3.5		
	3.8-	2.0-	4.7-	5.7-	6.8-	6.7-	8.1-		
	2.8		2.9	3.1	2.0	1.9	2.5		
WSQ	3 2	1 5	3 3	4 3	3 3	4 3	3 2	5 1	
	42.1	12.7	49.1	71.6	42.9	54.7	34.8	45.0	
	117.0	21.0	96.0	255.0	77.0	128.0	86.0		
	4.0	7.0	10.0	10.0	4.0	4.0	0.0		
	41.2		24.8	55.5	23.9	28.2	23.4		
	10	3	14	14	13	28	34	1	
T(X)	46.2-	12.0-	80.6-	138.8-	56.7-	95.1-	48.8-	58.0-	
	92.0	5.0-	4.0-	0.0	4.0-	4.0-	2.0		
	299.0-	23.0-	235.0-	716.0-	138.0-	305.0-	187.0-		
	130.5		66.3	171.6	46.1	76.2	44.4		
T(Y)	13.9-	7.3-	31.6-	62.7-	48.1-	46.6-	16.6-	22.0-	
	54.0	6.0-	37.0	32.0	0.0	0.0	40.0		
	112.0-	9.0-	110.0-	133.0-	118.0-	180.0-	189.0-		
	52.7		40.7	47.4	35.7	44.8	40.1		

SEPTEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.1-	0.3-	4.9-	6.7-	4.9-	5.4-	5.0-	3.9-	
	2.7	1.7	10.1	0.3-	2.0	3.1	2.0	1.5-	
	9.3-	1.3-	10.6-	10.1-	9.6-	12.1-	8.9-	8.7-	
	3.9		6.5	2.8	3.0	3.4	2.8		
W(Y)	1.3-	2.1-	1.1-	3.3-	2.5-	0.0-	1.5-	1.0-	
	7.8	1.9-	11.8	2.9	3.6	7.6	5.9	0.0	
	5.8-	2.4-	7.9-	6.4-	5.7-	6.7-	10.2-	3.2-	
	4.1		6.3	2.6	2.3	3.3	3.0		
WSQ	3 3	3 3	4 3	2 3	3 3	3 3	2 2	2 3	
	37.8	0.2	107.7	70.7	44.9	51.4	44.0	26.7	
	86.0	7.0	153.0	117.0	106.0	166.0	117.0	86.0	
	0.0	4.0	68.0	7.0	0.0	7.0	0.0	2.0	
	28.2		26.7	36.6	31.0	39.9	31.1		
	13	4	8	20	18	38	21	4	
T(X)	35.7-	0.8-	125.5-	151.3-	75.7-	92.3-	67.4-	57.0-	
	48.0	5.0	299.0	1.0-	10.0	53.0	7.0	3.0-	
	217.0-	4.0-	368.0-	299.0-	267.0-	437.0-	245.0-	203.0-	
	68.8		189.3	95.4	81.3	111.9	62.0		
T(Y)	1.1	5.7-	23.7-	80.8-	36.8-	11.2-	26.4-	20.0-	
	138.0	4.0-	390.0	9.0	17.0	131.0	81.0	0.0	
	54.0-	7.0-	220.0-	148.0-	101.0-	185.0-	301.0-	76.0-	
	60.6		192.4	55.9	35.5	66.7	73.8		

OCTOBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.3-	5.1-	6.3-	6.1-	5.7-	5.6-	7.5-	6.4-	
	1.6-	1.8-	3.6-	2.0-	0.0	0.3-	0.0	3.5-	
	7.1-	8.1-	9.3-	10.1-	10.4-	9.7-	10.2-	8.7-	
	1.7	1.7	1.9	2.2	2.4	2.7	2.3	1.7	
W(Y)	2.2-	1.9-	1.8-	1.2-	1.1-	1.3-	0.9-	2.3-	
	7.7	1.0	2.5	3.9	3.9	4.9	1.5	0.1-	
	7.8-	4.0-	5.5-	7.0-	5.3-	6.0-	5.3-	5.3-	
	3.8	1.3	2.5	2.5	2.2	3.0	1.7	1.6	
WSQ	3 3	4 3	3 3	3 3	3 3	3 2	3 2	3 3	
	40.2	34.2	52.9	50.1	44.1	49.2	64.9	51.5	
	96.0	68.0	117.0	117.0	111.0	120.0	106.0	86.0	
	7.0	4.0	13.0	10.0	6.0	0.0	0.0	17.0	
	25.5	16.2	29.7	36.1	28.9	34.9	27.9	21.4	
	13	10	19	28	30	25	22	13	
T(X)	47.4-	46.3-	95.9-	96.8-	77.2-	91.0-	139.8-	89.3-	
	5.0-	4.0-	15.0-	7.0-	0.0	0.0	0.0	17.0-	
	160.0-	141.0-	275.0-	280.0-	297.0-	292.0-	280.0-	187.0-	
	43.4	36.5	81.8	97.4	79.6	88.3	84.6	57.7	
T(Y)	28.2-	16.1-	31.3-	33.4-	19.2-	31.2-	16.2-	30.0-	
	134.0	2.0	30.0	31.0	31.0	68.0	36.0	1.0-	
	194.0-	32.0-	162.0-	207.0-	93.0-	149.0-	110.0-	110.0-	
	73.8	9.0	51.2	58.6	30.6	53.8	34.7	32.9	

NOVEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.4-	6.2-	6.8-	6.8-	9.0-	8.9-	8.9-	8.9-	
	1.7-	0.0	0.0	0.0	3.6-	3.8-	5.2-	6.7-	
	9.3-	10.7-	13.7-	11.6-	12.7-	13.7-	13.7-	12.1-	
	2.1	2.9	3.3	2.5	2.7	2.4	2.1	1.5	
W(Y)	3.0-	2.0-	1.4-	1.5-	2.6-	3.4-	5.2-	1.5-	
	0.9-	5.9	1.9	2.2	1.7	1.7	0.1-	0.1-	
	6.0-	9.0-	6.7-	6.0-	5.6-	11.7-	12.1-	4.5-	
	1.6	3.6	2.4	2.3	2.4	3.4	3.6	1.8	
WSQ	2 3	2 3	3 3	4 3	3 3	3 3	3 2	4 3	
	44.8	63.4	64.7	60.6	101.8	108.1	124.9	86.1	
	117.0	116.0	193.0	153.0	171.0	325.0	325.0	166.0	
	7.0	0.0	0.0	0.0	13.0	26.0	45.0	45.0	
	26.6	32.7	49.3	36.5	50.3	61.5	66.9	32.7	
	13	14	22	31	18	25	18	10	
T(X)	68.3-	119.3-	139.7-	125.9-	250.1-	244.6-	265.1-	202.7-	
	7.0-	0.0	0.0	0.0	15.0-	32.0-	61.0-	62.0-	
	275.0-	314.0-	539.0-	400.0-	458.0-	710.0-	710.0-	437.0-	
	68.5	92.4	149.0	108.1	146.0	158.5	153.9	102.4	
T(Y)	35.3-	36.8-	32.5-	31.0-	80.3-	113.1-	175.7-	42.3-	
	3.0-	81.0	13.0	30.0	41.0	47.0	2.0-	1.0-	
	162.0-	248.0-	141.0-	150.0-	207.0-	606.0-	606.0-	163.0-	
	40.9	75.0	46.9	50.2	75.8	138.0	170.8	55.1	

DECEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.3-	6.4-	6.3-	7.5-	6.5-	7.1-	6.2-	2.9-	
	3.9-	4.3-	4.6-	3.3-	3.9-	1.6-	2.9		
	9.8-	10.1-	7.8-	12.3-	9.8-	12.9-	11.1-		
	1.8	1.9	1.2	2.7	1.6	3.0	3.2		
W(Y)	5.0-	3.3-	0.7-	2.9-	4.1-	0.7-	1.5-	7.7	
	2.9-	1.6-	6.3	7.0	2.2-	12.5	4.2		
	8.4-	5.3-	7.1-	5.0-	5.7-	6.7-	4.9-		
	1.5	1.4	3.8	3.0	1.0	4.4	2.7		
WSQ	3 3	2 3	3 3	3 3	3 3	3 3	3 2	5 4	
	84.3	57.1	56.6	82.3	62.6	79.6	58.8	68.0	
	166.0	106.0	86.0	160.0	128.0	179.0	140.0		
	26.0	21.0	26.0	26.0	26.0	10.0	26.0		
	36.8	27.4	15.4	40.4	25.0	45.5	30.2		
	14	8	11	19	19	24	13	1	
T(X)	168.4-	104.1-	87.5-	179.0-	110.8-	164.2-	105.8-	50.0-	
	24.0-	23.0-	30.0-	21.0-	24.0-	5.0-	20.0		
	354.0-	280.0-	138.0-	437.0-	305.0-	466.0-	365.0-		
	96.7	85.8	34.8	130.0	71.1	126.8	98.8		
T(Y)	115.6-	47.9-	9.8-	62.1-	68.1-	16.7-	24.7-	134.0	
	21.0-	9.0-	109.0	165.0	16.0-	474.0	52.0		
	303.0-	93.0-	167.0-	149.0-	180.0-	185.0-	137.0-		
	77.0	28.4	66.8	68.7	40.9	122.5	46.4		

JANUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.1-	6.2-	7.0-	5.6-	8.1-	6.1-	7.6-	9.5-	
	1.9	4.4-	2.4-	0.7-	2.2-	0.8	4.9-	6.2-	
	10.1-	12.1-	15.4-	10.1-	11.7-	11.5-	12.9-	11.6-	
	4.4	2.8	4.3	2.3	3.4	2.9	2.5	1.8	
W(Y)	6.6-	3.8-	1.6-	3.1-	0.3	0.2	1.6-	5.5-	
	1.9-	1.3-	2.5	0.8	2.7	7.5	2.6	1.9-	
	10.3-	6.0-	5.0-	6.8-	2.3-	13.9-	6.0-	7.7-	
	3.0	1.7	1.9	2.1	1.6	3.9	2.9	2.0	
WSQ	3 2	2 4	4 3	3 3	3 3	3 3	2 2	3 2	
	98.3	63.7	74.3	51.7	80.5	60.8	75.1	127.8	
	106.0	166.0	238.0	120.0	140.0	325.0	166.0	166.0	
	60.0	26.0	7.0	7.0	10.0	7.0	32.0	96.0	
	17.1	47.6	79.2	33.4	49.5	56.6	41.3	26.5	
	6	6	10	22	15	30	8	6	
T(X)	125.3-	114.8-	173.9-	92.6-	204.1-	105.8-	157.5-	297.3-	
	52.0	27.0-	7.0-	3.0-	8.0-	5.0	37.0-	160.0-	
	280.0-	437.0-	681.0-	280.0-	385.0-	594.0-	466.0-	402.0-	
	122.1	145.4	234.7	81.7	150.1	119.6	136.2	85.0	
T(Y)	173.5-	59.2-	35.6-	53.9-	1.5	18.7-	36.2-	171.8-	
	52.0-	15.0-	16.0	5.0	64.0	248.0	36.0	52.0-	
	285.0-	163.0-	207.0-	200.0-	71.0-	720.0-	116.0-	253.0-	
	94.1	53.3	64.1	56.3	37.9	141.8	54.6	66.9	

FEBRUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.8-	5.4-	7.6-	5.9-	6.0-	6.9-	5.6-		
	5.1-	5.3-	2.9-	1.7	0.0	0.0	1.7-		
	10.3-	5.8-	12.1-	12.1-	11.1-	19.3-	12.0-		
	2.0		2.5	3.6	3.0	3.7	3.0		
W(Y)	3.5-	3.2-	3.4-	6.2-	3.8-	5.3-	6.1-		
	0.1-	3.1-	0.1-	1.0	3.5	3.4	3.3-		
	5.3-	3.4-	8.2-	13.3-	11.2-	11.0-	9.9-		
	1.7		2.7	3.3	3.7	3.2	1.3		
WSQ	3 2	5 3	3 4	3 3	3 3	3 2	3 2		
	79.9	39.7	83.7	96.6	73.6	100.1	79.4		
	106.0	45.0	166.0	239.0	198.0	424.0	193.0		
	45.0	38.0	60.0	4.0	0.0	3.0	26.0		
	23.7		32.0	57.0	52.6	77.6	51.5		
	7	4	8	25	40	34	23	0	
T(X)	170.3-	45.7-	169.0-	169.5-	139.6-	202.9-	135.3-		
	47.0-	43.0-	60.0-	5.0	0.0	0.0	11.0-		
	285.0-	54.0-	437.0-	437.0-	402.0-	1147.0-	472.0-		
	95.4		109.8	130.9	116.5	210.2	140.5		
T(Y)	91.3-	26.7-	75.5-	173.9-	100.5-	141.1-	124.0-		
	2.0-	25.0-	1.0-	2.0	69.0	95.0	21.0-		
	100.0-	32.0-	171.0-	586.0-	434.0-	442.0-	360.0-		
	31.1		63.7	130.5	123.9	135.8	96.5		

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.2-	6.4-	6.9-	7.4-	5.5-	5.6-	5.2-	5.8-	
	0.0	4.8-	5.1-	0.0	2.4-	0.0	0.5-	5.1-	
	10.7-	7.5-	8.2-	12.4-	10.6-	8.6-	8.2-	6.1-	
	2.6	0.8	1.0	3.7	2.0	2.1	2.8		
W(Y)	4.6-	4.6-	1.7-	1.7-	2.7-	2.4-	1.3-	1.0-	
	1.8	1.8-	1.4	1.7	2.0	0.0	1.3	0.9-	
	10.8-	7.5-	5.3-	9.0-	9.0-	4.9-	4.2-	1.1-	
	3.2	2.1	1.9	2.7	2.7	1.4	1.6		
WSQ	3 2	2 4	3 3	3 3	3 3	3 3	2 2	3 2	
	78.0	68.1	56.2	78.9	47.9	43.7	38.8	34.0	
	166.0	96.0	68.0	153.0	153.0	90.0	77.0	38.0	
	0.0	26.0	26.0	0.0	10.0	10.0	2.0	26.0	
	46.3	23.2	13.9	51.8	32.3	22.1	25.1		
	24	8	12	19	29	21	13	3	
T(X)	147.3-	113.2-	96.7-	190.2-	75.6-	69.5-	63.5-	43.0-	
	0.0	30.0-	32.0-	0.0	8.0-	0.0	1.0-	31.0-	
	325.0-	191.0-	143.0-	427.0-	368.0-	209.0-	170.0-	49.0-	
	98.4	51.9	37.9	144.7	79.1	56.2	52.2		
T(Y)	116.4-	94.0-	24.8-	48.1-	43.8-	30.2-	12.8-	8.0-	
	53.0	11.0-	24.0	47.0	13.0	0.0	18.0	6.0-	
	372.0-	194.0-	93.0-	248.0-	248.0-	99.0-	73.0-	9.0-	
	112.7	67.4	31.4	77.2	64.1	28.0	25.3		

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.0-	5.5-	7.8-	7.5-	6.4-	7.2-	8.0-	7.5-	
	2.7-	2.7-	5.3-	3.1-	1.8-	3.2-	5.1-	7.2-	
	9.8-	8.4-	9.7-	11.2-	11.2-	12.1-	9.6-	7.8-	
	2.6	2.2	1.5	2.1	2.5	2.2	1.2		
W(Y)	5.2-	5.1-	0.8-	1.9-	1.5-	0.7-	3.9-	6.4-	
	0.1-	1.8-	3.4	1.0	3.8	4.5	1.3	6.2-	
	9.1-	8.1-	5.0-	6.9-	5.0-	7.4-	7.4-	6.7-	
	3.5	2.3	2.9	2.2	2.4	3.8	2.7		
WSQ	3 3	3 3	4 4	3 3	3 3	3 2	2 2	2 2	
	95.4	66.5	72.4	69.5	54.9	71.7	87.9	97.7	
	166.0	96.0	106.0	140.0	137.0	153.0	128.0	106.0	
	68.0	13.0	32.0	13.0	3.0	17.0	26.0	91.0	
	37.4	26.2	22.4	37.5	39.4	37.1	28.7		
	8	6	10	22	16	24	9	3	
T(X)	174.1-	104.5-	152.5-	150.2-	108.8-	148.6-	188.7-	195.3-	
	48.0-	13.0-	37.0-	13.0-	4.0-	15.0-	31.0-	178.0-	
	354.0-	216.0-	268.0-	346.0-	363.0-	420.0-	269.0-	217.0-	
	102.1	64.4	78.4	109.5	110.7	108.5	73.8		
T(Y)	136.0-	100.2-	12.9-	45.1-	35.9-	37.7-	105.6-	166.7-	
	1.0-	7.0-	95.0	8.0	53.0	52.0	18.0	152.0-	
	303.0-	189.0-	100.0-	198.0-	130.0-	230.0-	230.0-	185.0-	
	111.6	59.3	56.8	64.4	55.3	86.1	77.9		

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.1-	6.8-	6.8-	8.2-	8.3-	6.9-	7.4-		
	3.1-	1.4-	5.8-	0.6-	3.1-	3.5-	3.1-		
	9.8-	10.6-	9.4-	13.2-	10.6-	11.3-	12.9-		
	1.9	2.6	1.3	2.6	2.0	2.3	3.1		
W(Y)	5.4-	6.3-	4.1-	1.6-	1.7-	0.0	1.9-		
	0.1-	3.7-	2.2-	3.1	1.4	5.0	0.0		
	8.4-	9.0-	8.0-	7.4-	5.3-	5.5-	7.0-		
	2.1	1.9	2.0	2.9	1.9	2.2	2.2		
WSQ	4 3	3 3	3 3	3 3	3 3	4 3	2 2		
	75.2	95.8	68.1	84.5	79.4	57.4	73.4		
	166.0	193.0	153.0	179.0	132.0	128.0	166.0		
	17.0	38.0	38.0	10.0	10.0	13.0	10.0		
	36.2	51.6	38.4	40.1	33.1	34.7	52.4		
	18	11	8	19	16	21	12		0
T(X)	125.2-	171.8-	118.1-	189.5-	184.6-	116.0-	163.9-		
	15.0-	24.0-	46.0-	2.0-	11.0-	15.0-	11.0-		
	354.0-	417.0-	325.0-	498.0-	332.0-	354.0-	466.0-		
	91.9	135.5	96.1	123.5	99.3	104.5	160.0		
T(Y)	112.2-	155.3-	81.5-	49.8-	42.5-	7.3-	38.8-		
	1.0-	32.0-	17.0-	72.0	39.0	47.0	0.0		
	303.0-	356.0-	278.0-	217.0-	169.0-	162.0-	207.0-		
	82.2	110.3	90.3	73.1	56.4	46.2	58.6		

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.5-	5.6-	7.6-	8.7-	7.1-	8.3-	7.2-	6.5-	
	4.9	3.1-	3.9-	4.8-	0.8	3.9-	2.2-	5.3-	
	10.6-	11.1-	12.1-	11.1-	11.0-	12.9-	13.7-	9.2-	
	4.5	2.2	2.5	1.8	3.0	2.7	3.1	1.0	
W(Y)	4.0-	4.8-	3.5-	4.5-	4.0-	3.7-	3.2-	2.3-	
	1.2	2.7-	0.1-	0.9-	0.0	0.0	0.0	0.1-	
	7.2-	6.7-	7.1-	8.0-	6.4-	7.7-	11.7-	3.9-	
	2.5	1.5	2.0	1.9	1.8	2.4	2.7	1.5	
WSQ	3 3	2 3	3 3	3 3	3 2	3 3	3 3	3 2	
	62.6	60.9	80.6	102.4	79.4	95.1	79.2	50.9	
	128.0	166.0	153.0	166.0	161.0	166.0	325.0	96.0	
	2.0	17.0	26.0	26.0	21.0	26.0	7.0	32.0	
	38.3	43.5	39.4	38.7	45.7	45.7	76.9	18.5	
	14	14	18	25	15	27	17	11	
T(X)	112.1-	106.4-	171.3-	232.8-	164.4-	213.3-	166.0-	81.0-	
	30.0	15.0-	24.0-	30.0-	5.0	24.0-	6.0-	37.0-	
	332.0-	402.0-	420.0-	402.0-	390.0-	466.0-	710.0-	235.0-	
	111.4	112.6	127.8	108.2	132.6	144.4	192.1	53.7	
T(Y)	76.9-	86.1-	73.0-	125.7-	91.3-	93.1-	85.0-	32.7-	
	2.0	13.0-	2.0-	6.0-	0.0	0.0	0.0	0.0	
	167.0-	237.0-	185.0-	278.0-	230.0-	253.0-	606.0-	88.0-	
	57.5	78.2	57.3	75.8	74.3	75.8	140.5	28.1	

JULY 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.0-	6.2-	6.3-	7.9-	7.3-	6.4-	7.4-	6.8-	
	0.0	0.0	0.0	3.9-	3.3-	3.7	5.1-	3.3-	
	10.2-	13.2-	10.3-	11.6-	13.2-	11.8-	9.1-	10.7-	
	2.5	2.7	2.1	1.6	2.5	3.1	0.9	1.4	
W(Y)	4.1-	3.2-	2.5-	1.7-	2.2-	1.4-	0.2	0.2	
	3.0	1.4	2.7	1.7	4.0	6.3	5.6	9.0	
	9.9-	7.3-	7.0-	6.4-	6.0-	6.4-	3.6-	3.6-	
	2.8	2.5	2.7	1.9	2.0	2.5	2.0	2.7	
WSC	4 2	4 3	4 3	3 4	3 3	3 3	3 2	2 3	
	55.3	62.8	58.1	70.8	67.5	58.7	59.2	54.8	
	166.0	179.0	117.0	134.0	179.0	153.0	88.0	140.0	
	13.0	0.0	7.0	26.0	13.0	2.0	26.0	17.0	
	32.0	36.9	32.0	24.6	38.2	31.0	15.2	24.7	
	38	32	35	37	29	59	24	48	
T(X)	80.9-	116.3-	106.4-	148.6-	138.3-	112.8-	109.2-	96.2-	
	0.0	0.0	0.0	24.0-	14.0-	20.0	31.0-	18.0-	
	296.0-	498.0-	299.0-	372.0-	498.0-	400.0-	211.0-	334.0-	
	79.3	108.5	85.6	85.4	123.8	93.3	48.1	67.7	
T(Y)	62.6-	56.1-	45.1-	28.2-	29.6-	24.2-	2.9	9.4	
	47.0	24.0	48.0	47.0	130.0	109.0	115.0	297.0	
	360.0-	185.0-	207.0-	124.0-	145.0-	163.0-	86.0-	85.0-	
	75.8	57.9	69.7	39.1	45.2	46.1	37.2	58.8	

AUGUST 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.5-	6.4-	7.6-	7.0-	5.9-	6.9-	6.3-	5.9-	
	0.0	1.0-	2.7-	3.9-	0.1	2.1	2.1-	0.0	
	9.6-	10.1-	10.1-	9.3-	9.3-	12.4-	9.8-	9.7-	
	2.3	2.4	1.8	1.6	2.1	2.4	1.9	2.0	
W(Y)	4.1-	3.3-	2.5-	2.7-	1.7-	1.3-	0.2-	0.1	
	1.7	1.4	1.5	0.0	2.6	5.1	3.4	3.4	
	8.1-	6.7-	6.7-	7.1-	7.7-	8.7-	3.2-	5.2-	
	2.6	1.8	2.5	2.8	2.3	2.4	1.3	1.9	
WSC	4 3	4 3	4 3	3 3	3 3	4 3	3 3	2 4	
	59.1	61.1	74.2	67.7	47.7	60.9	45.4	42.6	
	117.0	117.0	106.0	106.0	86.0	179.0	106.0	106.0	
	0.0	4.0	13.0	17.0	13.0	1.0	4.0	0.0	
	29.5	32.9	21.1	24.3	22.6	34.9	25.6	23.1	
	41	31	17	16	29	118	30	42	
T(X)	93.8-	117.6-	156.5-	131.9-	77.4-	120.6-	82.9-	69.3-	
	0.0	2.0-	11.0-	19.0-	1.0	5.0	5.0-	0.0	
	275.0-	299.0-	280.0-	217.0-	217.0-	427.0-	268.0-	268.0-	
	70.2	94.3	70.5	61.9	59.3	98.9	70.5	58.4	
T(Y)	75.5-	54.6-	45.2-	58.8-	25.5-	29.3-	0.6-	2.3	
	11.0	24.0	36.0	0.0	36.0	51.0	95.0	95.0	
	189.0-	185.0-	185.0-	185.0-	107.0-	329.0-	76.0-	145.0-	
	63.1	48.3	53.7	67.8	34.3	58.3	24.4	32.2	

SEPTEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.5-	3.2-	3.9-	5.5-	5.8-	6.2-	6.4-	6.1-	
	1.0	9.3	0.0	1.0-	1.7-	2.5	4.9	0.1-	
	10.1-	9.6-	8.9-	9.6-	10.6-	12.7-	10.3-	9.8-	
	2.6	4.1	2.4	1.9	2.2	3.0	2.6	2.4	
W(Y)	3.2-	1.6-	1.9-	1.0-	2.6-	2.0-	1.1-	1.3-	
	6.1	7.2	6.1	5.8	1.5	4.7	7.7	11.3	
	7.9-	8.1-	8.7-	8.1-	5.8-	9.1-	5.7-	8.4-	
	3.6	3.8	2.8	2.6	2.0	2.5	2.1	2.9	
WSC	3 2	4 3	3 3	3 3	3 3	4 3	3 3	2 3	
	42.9	44.4	32.9	42.3	48.8	57.3	53.4	53.2	
	117.0	106.0	106.0	106.0	117.0	166.0	106.0	166.0	
	0.0	5.0	0.0	1.0	13.0	0.0	0.0	2.0	
	32.4	33.9	27.0	22.2	24.8	37.1	27.2	33.8	
	33	28	22	26	28	70	62	60	
T(X)	54.3-	46.3-	42.3-	62.3-	80.7-	108.4-	101.2-	94.7-	
	8.0	217.0	0.0	1.0-	11.0-	28.0	34.0	2.0-	
	299.0-	267.0-	245.0-	267.0-	314.0-	458.0-	285.0-	354.0-	
	69.6	87.0	52.9	54.5	70.7	110.7	79.6	87.2	
T(Y)	52.1-	30.0-	25.5-	16.8-	33.3-	35.0-	16.7-	23.1-	
	49.0	100.0	49.0	46.0	8.0	97.0	134.0	354.0	
	220.0-	189.0-	205.0-	189.0-	92.0-	253.0-	118.0-	303.0-	
	66.0	62.1	51.7	43.2	30.8	54.5	36.9	75.7	

OCTOBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.2-	6.5-	5.8-	6.9-	7.7-	6.7-	6.8-	6.8-	
	2.0-	1.5-	1.5-	3.9-	3.9-	2.3	2.3	3.3-	
	9.6-	10.1-	10.1-	10.3-	10.3-	12.7-	10.3-	10.8-	
	2.1	2.4	2.2	1.9	2.0	2.9	2.8	1.8	
W(Y)	4.3-	3.4-	2.1-	1.6-	2.1-	1.9-	0.6-	0.6-	
	0.0	1.1-	2.1	2.2	0.0	10.2	7.2	4.9	
	7.4-	7.1-	5.3-	4.7-	4.7-	8.7-	4.4-	3.9-	
	1.9	1.5	2.0	2.2	1.4	3.0	2.6	2.0	
WSC	4 2	5 3	4 3	3 3	2 3	4 3	3 3	2 3	
	65.2	61.9	46.7	59.0	70.0	66.0	62.0	53.7	
	128.0	106.0	106.0	106.0	108.0	179.0	117.0	117.0	
	7.0	10.0	10.0	26.0	26.0	7.0	0.0	13.0	
	34.4	33.5	26.0	26.5	26.6	39.7	29.0	26.3	
	37	26	25	16	17	86	60	52	
T(X)	1.9.6-	125.2-	82.1-	118.1-	154.9-	130.0-	125.0-	99.9-	
	6.0-	5.0-	5.0-	24.0-	24.0-	10.0	8.0	13.0-	
	269.0-	280.0-	280.0-	285.0-	286.0-	458.0-	301.0-	319.0-	
	91.1	93.6	77.0	83.9	87.9	110.3	88.3	80.5	
T(Y)	81.1-	60.6-	24.4-	28.8-	36.5-	35.9-	12.5-	11.4-	
	3.0	7.0-	17.0	21.0	0.0	385.0	106.0	68.0	
	200.0-	185.0-	110.0-	110.0-	76.0-	333.0-	100.0-	100.0-	
	65.4	51.0	29.7	37.6	26.1	83.5	45.6	34.2	

NOVEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.3-	5.6-	6.5-	5.9-	5.9-	6.2-	5.7-	6.0-	
	0.8-	7.7	0.7-	1.8	5.7	3.3	0.0	0.0	
	12.1-	10.8-	12.7-	11.3-	14.2-	15.2-	12.7-	12.4-	
	2.4	3.5	2.8	3.4	4.7	3.8	3.1	2.3	
W(Y)	2.8-	2.5-	1.5-	1.1-	3.5-	1.1-	0.4-	0.6-	
	3.9	1.6	2.5	3.9	2.4	8.1	6.7	5.1	
	6.7-	5.2-	4.7-	4.8-	13.4-	15.5-	8.1-	7.3-	
	2.4	1.7	1.9	2.0	3.5	3.9	3.4	3.0	
WSQ	4 3	4 3	4 2	2 3	3 3	4 3	4 3	2 3	
	59.4	52.7	55.9	51.6	81.0	68.7	53.9	50.4	
	166.0	117.0	166.0	128.0	208.0	271.0	166.0	208.0	
	1.0	0.0	4.0	10.0	7.0	1.0	0.0	7.0	
	32.7	34.5	39.3	36.1	57.2	59.8	41.1	35.3	
	41	39	28	20	21	57	46	57	
T(X)	111.7-	98.1-	114.0-	99.1-	130.5-	131.8-	97.2-	85.8-	
	1.0-	107.0	3.0-	11.0	118.0	20.0	0.0	0.0	
	437.0-	319.0-	458.0-	354.0-	581.0-	670.0-	458.0-	509.0-	
	90.0	104.0	116.3	114.1	182.3	163.6	123.5	94.3	
T(Y)	53.2-	34.2-	23.7-	17.9-	81.9-	34.1-	9.9-	15.5-	
	24.0	41.0	36.0	18.0	7.0	141.0	92.0	124.0	
	135.0-	145.0-	124.0-	124.0-	506.0-	733.0-	237.0-	300.0-	
	50.2	37.3	35.5	30.7	114.9	114.9	54.3	63.2	

DECEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.0-	6.2-	5.6-	4.9-	2.3-	3.8-	2.8-	4.1-	
	0.0	1.8-	2.1-	2.1-	6.2	3.4	8.1	7.7	
	12.7-	12.7-	10.1-	7.7-	7.2-	12.1-	10.1-	11.3-	
	2.4	2.5	2.9	1.7	3.5	3.1	4.5	4.1	
W(Y)	2.4-	2.4-	0.2-	0.0	0.2-	0.7-	1.1-	3.1-	
	2.9	7.1	5.8	2.6	7.6	8.4	4.2	2.4	
	8.4-	7.9-	4.0-	4.2-	4.2-	9.7-	7.1-	14.6-	
	2.6	2.7	2.6	1.7	2.2	3.0	3.1	2.9	
WSQ	4 3	5 3	4 3	3 3	4 4	4 3	3 3	2 3	
	54.6	57.9	46.7	30.0	22.7	33.3	38.9	51.2	
	166.0	166.0	106.0	68.0	68.0	166.0	106.0	238.0	
	0.0	5.0	4.0	4.0	0.0	0.0	0.0	4.0	
	35.0	34.7	32.0	19.8	21.5	30.9	31.8	42.2	
	44	29	14	21	29	81	33	60	
T(X)	95.1-	107.9-	89.6-	43.2-	21.2-	46.4-	38.4-	71.7-	
	0.0	5.0-	5.0-	5.0-	49.0	17.0	167.0	107.0	
	460.0-	458.0-	280.0-	134.0-	123.0-	437.0-	280.0-	354.0-	
	100.8	99.5	89.7	38.4	35.9	71.9	94.6	95.4	
T(Y)	34.3-	36.7-	8.9-	2.0-	2.6-	11.4-	22.3-	51.2-	
	77.0	123.0	46.0	36.0	105.0	160.0	36.0	7.0	
	303.0-	220.0-	52.0-	73.0-	73.0-	268.0-	167.0-	642.0-	
	56.2	55.5	28.7	22.3	27.4	53.8	52.1	101.0	

JANUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.6-	8.1-	7.8-	7.3-	6.3-	5.8-	6.7-	6.8-	
	0.9	3.9-	2.9-	0.1-	1.3-	0.7	2.6	1.7	
	15.4-	15.2-	13.0-	13.9-	12.7-	14.2-	16.0-	14.2-	
	3.4	2.6	2.6	2.4	2.4	4.2	4.1	3.2	
W(Y)	4.3-	3.6-	3.2-	1.6-	1.8-	2.2-	2.6-	2.9-	
	0.1-	2.5	8.6	9.3	6.3	3.8	6.3	5.2	
	10.0-	11.1-	9.0-	7.4-	7.1-	12.1-	10.3-	9.9-	
	1.6	2.4	3.0	3.5	2.8	3.1	3.2	3.2	
WSQ	4 3	4 3	5 3	4 3	4 3	4 4	4 3	3 3	
	91.3	91.9	86.4	74.0	56.4	66.3	78.6	75.4	
	238.0	238.0	193.0	193.0	166.0	208.0	255.0	208.0	
	17.0	26.0	21.0	21.0	2.0	0.0	2.0	7.0	
	58.4	51.2	45.0	36.4	33.9	49.2	54.5	45.2	
	75	62	45	31	31	55	53	78	
T(X)	201.0-	204.9-	188.5-	148.9-	104.1-	120.5-	164.6-	154.0-	
	6.0	24.0-	16.0-	2.0-	2.0-	268.0	16.0	5.0	
	681.0-	672.0-	513.0-	548.0-	458.0-	581.0-	728.0-	581.0-	
	174.3	149.2	132.4	115.6	95.7	140.1	169.0	125.8	
T(Y)	96.5-	85.5-	67.0-	26.7-	29.8-	56.5-	45.8-	61.2-	
	2.0-	112.0	269.0	243.0	109.0	53.0	140.0	118.0	
	442.0-	456.0-	356.0-	230.0-	207.0-	477.0-	303.0-	360.0-	
	78.8	92.1	97.5	87.6	58.5	93.1	86.0	97.1	

FEBRUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.1-	7.1-	7.4-	9.4-	8.0-	7.8-	7.7-	7.6-	
	0.0	3.3-	3.9-	4.4-	0.7-	0.0	2.2-	4.0-	
	14.2-	11.5-	14.5-	15.9-	15.2-	13.7-	12.7-	11.1-	
	2.7	2.0	2.6	3.1	2.7	2.8	2.6	1.9	
W(Y)	2.3-	3.0-	3.2-	3.1-	3.9-	3.0-	1.6-	0.9-	
	7.8	3.4	1.7	1.7	2.1	2.6	2.0	7.8	
	6.4-	11.2-	9.9-	8.8-	11.2-	15.2-	6.3-	4.0-	
	2.7	2.5	2.5	2.7	2.6	3.3	2.0	2.5	
WSQ	4 3	4 3	4 3	3 3	3 3	4 3	4 3	2 4	
	70.2	71.0	78.0	114.1	94.5	89.4	73.2	67.9	
	208.0	179.0	238.0	289.0	239.0	306.0	166.0	128.0	
	0.0	21.0	17.0	21.0	17.0	0.0	26.0	17.0	
	39.0	38.4	52.5	61.0	48.7	59.4	38.0	30.8	
	56	51	35	28	44	109	28	42	
T(X)	144.1-	137.3-	158.0-	279.4-	205.3-	191.7-	163.0-	144.0-	
	0.0	20.0-	19.0-	25.0-	10.0-	0.0	21.0-	19.0-	
	581.0-	436.0-	638.0-	776.0-	670.0-	628.0-	458.0-	348.0-	
	121.7	106.8	152.0	183.1	146.3	149.9	128.1	95.9	
T(Y)	39.1-	60.4-	71.5-	91.1-	103.2-	88.2-	18.7-	15.9-	
	217.0	95.0	50.0	47.0	17.0	74.0	71.0	217.0	
	180.0-	406.0-	360.0-	290.0-	406.0-	766.0-	85.0-	124.0-	
	60.5	83.0	88.9	91.6	82.6	129.0	36.0	58.2	

MARCH 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.6-	8.8-	8.8-	9.2-	7.1-	5.6-	6.4-	5.9-	
	3.9	4.3-	2.9-	2.9-	0.1-	3.6	0.9	4.7	
	11.7-	14.6-	15.4-	15.4-	12.7-	11.6-	13.9-	9.7-	
	4.0	2.3	2.6	3.1	2.9	3.5	2.5	2.4	
W(Y)	4.7-	3.5-	1.9-	1.9-	0.1	0.1-	0.3	0.5	
	3.0	3.8	3.0	2.4	7.7	9.8	7.2	7.2	
	10.0-	11.9-	7.8-	6.7-	6.0-	7.7-	8.7-	8.0-	
	2.6	3.2	2.5	2.1	2.7	3.0	2.9	2.9	
WSQ	3 2	4 3	3 3	3 3	3 3	4 3	3 2	2 3	
	88.4	104.7	93.7	102.7	65.9	52.8	55.4	48.6	
	238.0	289.0	271.0	238.0	166.0	140.0	193.0	106.0	
	4.0	26.0	10.0	10.0	4.0	0.0	1.0	2.0	
	47.0	56.0	54.2	57.0	37.8	35.6	32.4	23.9	
	50	39	43	48	53	97	84	55	
T(X)	171.5-	237.4-	220.5-	257.9-	143.3-	99.5-	101.6-	76.3-	
	54.0	27.0-	10.0-	10.0-	1.0-	26.0	1.0	110.0	
	518.0-	713.0-	728.0-	681.0-	460.0-	384.0-	548.0-	268.0-	
	140.9	147.6	162.1	173.1	117.3	103.2	92.4	63.9	
T(Y)	112.2-	104.5-	54.9-	53.3-	4.8-	7.7-	4.9	11.6	
	24.0	53.0	24.0	27.0	107.0	251.0	225.0	181.0	
	442.0-	526.0-	346.0-	237.0-	145.0-	163.0-	205.0-	187.0-	
	95.1	123.8	82.9	67.0	48.4	53.3	54.2	51.2	

APRIL 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.2-	6.0-	6.7-	8.5-	7.8-	7.0-	6.5-	6.2-	
	2.7	0.1	2.1-	4.0-	1.8-	3.2	1.4	4.6	
	14.5-	14.5-	14.5-	14.9-	12.3-	15.8-	14.5-	14.2-	
	3.3	3.3	2.6	3.0	1.8	3.7	3.5	3.4	
W(Y)	3.9-	4.0-	3.7-	3.1-	2.9-	0.2-	0.5-	0.3-	
	0.0	0.0	0.0	0.8	2.6	8.5	8.7	5.1	
	11.2-	7.9-	8.1-	5.5-	5.7-	11.1-	9.9-	8.4-	
	2.3	2.3	1.8	1.7	1.9	4.0	4.3	3.5	
WSQ	4 2	4 3	5 3	3 3	3 3	4 3	4 3	2 3	
	70.0	68.8	68.2	93.6	76.6	78.2	71.9	62.9	
	238.0	233.0	238.0	223.0	172.0	304.0	238.0	271.0	
	4.0	4.0	4.0	21.0	13.0	2.0	2.0	10.0	
	57.0	53.5	47.0	55.0	29.0	58.0	56.1	61.7	
	53	34	22	25	36	89	42	62	
T(X)	133.3-	132.4-	133.0-	220.8-	162.3-	165.0-	143.4-	122.1-	
	37.0	1.0	5.0-	22.0-	7.0-	15.0	2.0	25.0	
	638.0-	638.0-	638.0-	635.0-	455.0-	789.0-	638.0-	670.0-	
	156.4	149.6	136.9	171.8	91.1	164.9	157.2	167.8	
T(Y)	81.6-	82.9-	71.5-	73.7-	61.2-	23.7-	29.9-	29.8-	
	0.0	0.0	0.0	5.0	41.0	313.0	203.0	143.0	
	406.0-	239.0-	239.0-	162.0-	170.0-	456.0-	360.0-	395.0-	
	87.7	72.3	63.8	57.5	52.4	113.0	110.7	106.7	

MAY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.3-	7.2-	7.5-	7.9-	8.6-	6.4-	7.0-	6.0-	
	0.1	0.4	3.6-	5.8-	6.3-	0.0	0.0	6.3	
	12.1-	12.1-	15.7-	11.6-	14.4-	13.9-	10.8-	11.2-	
	2.6	2.4	2.5	1.2	1.8	3.3	2.2	2.8	
W(Y)	4.0-	2.7-	2.6-	2.9-	3.1-	0.8-	0.4	1.4	
	0.1-	2.7	2.6	0.1-	0.1-	5.9	6.5	7.8	
	9.5-	9.4-	10.2-	4.7-	5.3-	5.2-	4.7-	5.3-	
	2.0	2.3	2.8	1.1	1.4	2.1	2.4	2.6	
WSQ	4 2	5 3	4 2	3 3	3 3	4 4	4 3	2 3	
	79.6	70.3	78.1	73.8	88.9	57.1	59.0	52.2	
	166.0	166.0	255.0	153.0	215.0	193.0	117.0	128.0	
	7.0	4.0	21.0	38.0	57.0	0.0	0.0	4.0	
	35.9	38.7	48.2	21.5	34.8	41.1	28.5	28.1	
	52	49	28	24	27	106	60	63	
T(X)	166.9-	146.1-	162.2-	153.7-	201.8-	119.9-	117.2-	90.6-	
	0.0	1.0	24.0-	46.0-	92.0-	0.0	0.0	72.0	
	437.0-	437.0-	719.0-	400.0-	602.0-	548.0-	319.0-	349.0-	
	101.5	108.0	142.5	73.5	117.2	118.8	84.9	83.9	
T(Y)	88.0-	57.8-	55.4-	53.5-	68.8-	16.3-	6.2	20.0	
	1.0-	48.0	120.0	1.0-	1.0-	95.0	181.0	217.0	
	330.0-	303.0-	303.0-	150.0-	132.0-	163.0-	112.0-	93.0-	
	69.6	71.6	87.7	29.7	35.6	44.4	46.5	46.9	

JUNE 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.0-	6.5-	5.6-	6.4-	6.3-	7.5-	6.9-	6.0-	
	1.0-	2.3-	1.7-	2.0-	0.7-	2.3	1.0	5.1	
	11.2-	13.0-	7.8-	10.1-	12.7-	14.4-	10.8-	10.7-	
	2.4	2.7	2.1	2.2	2.6	3.1	2.3	2.2	
W(Y)	3.8-	3.2-	2.1-	3.0-	2.1-	0.7-	1.0-	0.3	
	0.4	0.0	1.2	0.0	1.6	8.2	6.1	9.0	
	7.9-	10.0-	6.7-	7.5-	7.3-	7.0-	5.0-	4.7-	
	1.8	2.2	2.3	2.2	2.4	2.7	2.4	2.6	
WSQ	4 2	4 3	4 3	3 4	3 3	3 3	3 3	2 3	
	49.4	64.6	45.9	59.9	56.8	73.4	58.8	48.1	
	155.0	234.0	106.0	117.0	167.0	215.0	117.0	117.0	
	7.	17.0	13.0	7.0	7.0	0.0	7.0	21.0	
	34.9	53.0	27.7	32.2	35.4	41.4	27.7	24.6	
	34	26	10	42	66	96	56	51	
T(X)	74.6-	127.7-	73.4-	115.3-	109.3-	161.7-	116.0-	74.8-	
	4.0-	8.0-	11.0-	6.0-	3.0-	10.0	8.0	140.0	
	391.0-	518.0-	217.0-	299.0-	463.0-	602.0-	319.0-	315.0-	
	92.2	134.6	60.5	84.5	101.8	128.1	86.3	74.3	
T(Y)	54.5-	67.1-	33.5-	56.2-	37.9-	21.4-	20.7-	5.2	
	1.0	0.0	13.0	0.0	36.0	143.0	53.0	248.0	
	220.0-	442.0-	185.0-	194.0-	217.0-	237.0-	127.0-	110.0-	
	55.8	90.1	53.3	60.0	50.8	58.8	37.4	51.2	

JULY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.6-	6.0-	4.4-	5.7-	6.3-	7.1-	6.7-	6.7-	
	1.7-	2.3-	3.3	0.9-	1.0-	0.0	1.0-	2.0-	
	9.8-	11.1-	10.6-	11.1-	10.6-	13.0-	12.1-	12.7-	
	2.3	2.5	3.6	2.7	2.4	2.6	2.2	2.1	
W(Y)	5.0-	3.6-	1.5-	3.9-	3.0-	2.4-	1.4-	1.0-	
	1.1-	1.6-	4.0	0.0	2.3	3.5	2.4	2.1	
	10.2-	6.5-	4.0-	7.3-	7.1-	9.5-	5.2-	4.0-	
	2.0	1.5	1.5	2.3	1.5	2.5	1.7	1.4	
WSQ	3 2	4 3	3 3	3 3	3 3	3 3	4 3	2 3	
	65.7	58.0	36.7	60.7	56.7	69.1	55.4	52.8	
	166.0	166.0	128.0	128.0	117.0	193.0	166.0	166.0	
	13.0	10.0	0.0	4.0	8.0	0.0	2.0	7.0	
	36.6	37.4	35.2	32.3	29.0	41.8	33.3	30.7	
	32	28	23	39	56	104	72	78	
T(X)	107.2-	110.0-	68.7-	105.2-	107.1-	145.2-	107.4-	102.2-	
	7.0-	8.0-	20.0	2.0-	4.0-	0.0	2.0-	6.0-	
	354.0-	402.0-	332.0-	348.0-	314.0-	513.0-	437.0-	458.0-	
	91.7	102.3	92.5	90.1	85.5	113.4	98.4	93.7	
T(Y)	93.0-	59.7-	20.8-	64.8-	44.6-	56.1-	27.1-	15.3-	
	9.0-	5.0-	24.0	0.0	15.0	47.0	27.0	24.0	
	303.0-	237.0-	124.0-	208.0-	167.0-	330.0-	163.0-	100.0-	
	82.0	51.7	31.4	60.0	35.0	75.5	40.3	27.0	

AUGUST 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.7-	6.0-	5.6-	6.5-	7.4-	5.7-	7.1-	6.7-	
	1.4	0.5-	1.3-	3.9-	4.8-	2.0	0.2	1.9-	
	8.9-	13.0-	9.6-	10.2-	11.6-	9.6-	12.9-	13.9-	
	2.7	2.9	2.3	1.9	1.6	2.4	2.2	2.1	
W(Y)	4.6-	3.5-	2.8-	3.7-	2.1-	1.8-	1.0-	0.5-	
	3.5	1.4-	1.4	0.1-	5.3	3.9	4.3	6.5	
	7.2-	6.7-	6.0-	8.7-	4.7-	7.2-	5.0-	5.6-	
	1.8	1.3	1.6	2.5	1.8	2.1	1.7	1.8	
WSQ	4 2	5 2	4 3	3 3	2 3	3 3	3 3	2 3	
	53.4	58.4	47.3	65.1	65.9	46.1	58.3	52.3	
	106.0	193.0	106.0	179.0	140.0	106.0	166.0	193.0	
	7.0	4.0	4.0	26.0	26.0	0.0	0.0	4.0	
	23.7	40.9	27.4	40.2	27.9	25.5	34.6	32.3	
	45	42	30	14	26	82	60	73	
T(X)	76.6-	106.3-	82.0-	112.8-	129.0-	78.6-	113.8-	95.4-	
	7.0	2.0-	3.0-	24.0-	30.0-	6.0	0.0	4.0-	
	245.0-	513.0-	267.0-	385.0-	384.0-	267.0-	466.0-	548.0-	
	59.7	119.4	74.0	99.2	91.9	66.5	108.1	96.9	
T(Y)	64.9-	51.1-	35.2-	71.4-	30.6-	26.9-	11.8-	6.1-	
	40.0	4.0-	24.0	0.0	157.0	24.0	156.0	181.0	
	167.0-	192.0-	110.0-	329.0-	124.0-	167.0-	100.0-	92.0-	
	44.8	42.9	33.6	90.7	46.0	33.3	36.3	30.5	

SEPTEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.2-	5.8-	7.6-	7.8-	7.5-	6.8-	5.9-	4.6-	
	0.1	0.9-	3.9-	5.3-	3.1-	0.0	0.0	2.9	
	10.3-	9.6-	11.8-	10.5-	9.9-	15.2-	11.2-	9.6-	
	2.7	2.1	1.9	1.4	2.0	3.2	2.9	2.2	
W(Y)	4.4-	3.4-	3.5-	3.3-	3.0-	1.2-	0.1	0.8-	
	1.7	1.3	0.1-	0.1-	1.4	8.1	10.6	8.9	
	7.8-	6.7-	6.7-	6.7-	5.6-	7.4-	5.6-	6.3-	
	2.0	1.7	1.8	1.5	1.8	3.5	4.1	2.3	
WSQ	4 2	4 3	4 3	4 3	4 3	3 3	4 3	2 3	
	57.7	52.1	76.5	76.4	73.1	69.4	60.5	32.5	
	106.0	106.0	140.0	113.0	115.0	238.0	166.0	106.0	
	7.0	7.0	26.0	32.0	17.0	0.0	0.0	0.0	
	27.2	29.1	29.1	21.2	30.7	48.8	42.3	23.4	
	37	28	25	18	19	60	25	44	
T(X)	91.2-	86.9-	157.8-	160.4-	159.0-	142.3-	111.5-	45.5-	
	1.0	2.0-	24.0-	37.0-	15.0-	0.0	0.0	10.0	
	285.0-	267.0-	390.0-	302.0-	284.0-	672.0-	406.0-	267.0-	
	83.0	81.8	97.0	74.8	89.9	147.8	112.5	51.7	
T(Y)	62.2-	47.0-	67.2-	64.2-	65.9-	31.5-	14.1	4.7-	
	47.0	13.0	3.0-	2.0-	6.0	140.0	332.0	245.0	
	145.0-	185.0-	185.0-	185.0-	155.0-	230.0-	124.0-	100.0-	
	45.2	47.6	52.2	40.0	48.7	73.9	98.0	44.6	

OCTOBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.2-	6.0-	5.9-	8.4-	7.2-	6.2-	7.4-	6.6-	
	0.0	3.4-	2.0-	3.3-	0.1-	2.4	2.7-	1.5-	
	11.8-	9.8-	12.5-	14.4-	15.4-	12.4-	13.7-	13.7-	
	2.5	1.9	2.5	2.6	3.1	2.8	2.5	2.3	
W(Y)	3.6-	4.1-	2.1-	2.9-	2.3-	2.1-	2.0-	1.4-	
	0.0	1.2	3.3	3.1	9.3	7.0	7.2	4.3	
	8.4-	9.7-	7.4-	6.8-	8.9-	9.2-	7.1-	9.1-	
	2.3	3.0	2.5	2.1	3.1	2.7	2.4	2.2	
WSQ	3 2	4 3	3 3	3 3	3 3	4 3	3 3	2 3	
	51.3	65.3	51.8	90.0	77.7	58.0	70.4	56.4	
	166.0	166.0	179.0	208.0	306.0	208.0	193.0	193.0	
	0.0	21.0	7.0	26.0	4.0	6.0	10.0	17.0	
	33.9	41.8	43.1	43.9	54.6	39.5	40.0	39.1	
	33	29	26	28	45	85	68	65	
T(X)	80.0-	106.4-	101.0-	206.1-	163.6-	111.4-	147.1-	105.1-	
	0.0	19.0-	6.0-	20.0-	2.0-	6.0	11.0-	17.0-	
	393.0-	354.0-	474.0-	591.0-	758.0-	509.0-	539.0-	539.0-	
	87.9	95.6	118.5	141.5	154.2	109.8	125.2	117.2	
T(Y)	51.6-	87.3-	40.7-	62.7-	56.3-	38.0-	36.0-	27.0-	
	0.0	13.0	36.0	72.0	217.0	165.0	100.0	89.0	
	303.0-	303.0-	230.0-	217.0-	447.0-	300.0-	278.0-	230.0-	
	58.9	100.9	65.1	58.7	94.6	67.4	53.3	52.7	

NOVEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.6-	7.4-	5.6-	6.5-	9.7-	6.9-	5.3-	6.0-	
	3.9-	3.6-	2.9-	2.0-	3.1-	2.6	4.9	3.5	
	12.7-	12.7-	10.3-	13.5-	14.5-	13.7-	13.1-	12.9-	
	2.1	2.2	2.1	3.1	3.0	4.0	4.0	3.8	
W(Y)	2.6-	1.4-	0.6-	1.6-	1.4-	2.7-	0.9-	0.6-	
	2.1	1.3	3.1	2.1	5.2	9.6	10.6	4.0	
	7.1-	6.9-	6.7-	6.0-	5.4-	11.7-	8.4-	5.0-	
	2.0	2.2	2.3	2.1	2.8	4.0	4.3	2.3	
WSQ	4 2	4 3	3 3	2 3	2 3	4 3	3 3	2 3	
	58.9	67.2	41.8	59.4	112.5	87.1	63.3	56.4	
	166.0	166.0	106.0	208.0	238.0	325.0	193.0	166.0	
	17.0	13.0	10.0	10.0	13.0	2.0	2.0	4.0	
	34.4	37.0	26.4	48.1	57.6	73.9	44.8	42.6	
	38	21	24	32	35	58	52	62	
T(X)	109.9-	142.8-	70.1-	124.1-	283.7-	187.4-	110.6-	112.7-	
	19.0-	15.0-	10.0-	7.0-	13.0-	36.0	68.0	19.0	
	458.0-	458.0-	285.0-	553.0-	638.0-	710.0-	516.0-	466.0-	
	104.4	111.7	69.5	144.0	174.1	184.9	130.9	131.3	
T(Y)	43.3-	32.8-	7.4-	24.8-	55.4-	81.8-	3.9-	9.3-	
	17.0	18.0	72.0	18.0	155.0	267.0	332.0	118.0	
	185.0-	196.0-	93.0-	207.0-	239.0-	606.0-	303.0-	100.0-	
	47.9	52.1	33.8	45.1	87.7	151.1	103.9	38.0	

DECEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.5-	6.7-	7.5-	7.1-	6.5-	4.6-	1.0-	2.8-	
	1.7-	0.0	4.7-	1.7	7.8	6.9	14.5	7.7	
	12.1-	15.9-	10.6-	13.9-	12.9-	16.0-	16.0-	12.1-	
	2.5	2.9	1.7	3.6	4.5	4.9	6.9	4.9	
W(Y)	3.5-	1.8-	1.8-	0.9	0.8	1.1	1.4	0.3	
	2.6	5.1	5.5	8.4	6.7	10.7	10.6	9.6	
	10.2-	6.0-	6.7-	6.7-	7.0-	8.1-	6.0-	8.4-	
	2.4	2.7	3.1	3.4	3.6	5.1	4.7	3.7	
WSQ	4 2	4 3	4 3	2 3	3 3	4 4	4 3	3 3	
	80.7	64.4	72.1	75.6	76.7	72.6	72.8	45.0	
	238.0	239.0	128.0	193.0	166.0	255.0	255.0	166.0	
	10.0	0.0	31.0	13.0	13.0	9.0	0.0	2.0	
	43.3	52.7	24.9	44.4	41.2	57.4	62.7	38.1	
	39	30	20	32	39	54	54	75	
T(X)	171.4-	132.1-	146.0-	167.8-	151.7-	107.5-	4.2-	52.0-	
	10.0-	0.0	35.0-	11.0	217.0	203.0	638.0	134.0	
	518.0-	776.0-	332.0-	548.0-	466.0-	728.0-	728.0-	439.0-	
	118.2	151.7	82.8	140.6	150.2	177.0	221.4	101.8	
T(Y)	80.2-	35.2-	42.6-	1.7-	3.6-	15.0	57.4	9.1	
	36.0	140.0	61.0	217.0	185.0	314.0	368.0	267.0	
	442.0-	290.0-	185.0-	185.0-	207.0-	370.0-	141.0-	303.0-	
	88.6	71.3	61.6	74.1	75.3	131.9	123.4	85.9	

JANUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.7-	7.1-	2.6-	5.3-	4.7-	4.0-	4.7-	3.0-	
	1.2-	0.1-	8.2	1.8-	0.6-	5.9	5.4	10.2	
	10.2-	13.9-	9.1-	8.6-	9.2-	13.7-	12.4-	8.8-	
	2.4	3.1	4.2	1.8	3.0	4.3	4.0	3.8	
W(Y)	3.2-	1.1-	0.1	2.3-	1.7	1.9	0.6	2.7-	
	1.7	7.8	6.9	4.8	8.3	12.2	12.0	2.3	
	9.9-	8.4-	3.3-	7.8-	7.7-	10.3-	8.5-	7.1-	
	3.3	3.5	3.0	3.6	3.8	4.2	5.0	2.2	
WSQ	4 2	4 3	4 3	3 3	3 2	4 3	4 3	2 3	
	71.4	73.8	33.9	48.6	48.2	56.1	63.4	35.3	
	166.0	193.0	86.0	128.0	140.0	193.0	193.0	106.0	
	13.0	26.0	0.0	13.0	4.0	0.0	0.0	0.0	
	35.3	47.8	25.0	30.7	33.0	45.1	50.8	28.0	
	40	28	19	19	20	80	47	49	
T(X)	136.8-	152.5-	17.0-	74.1-	73.3-	83.0-	111.0-	38.4-	
	5.0-	1.0-	171.0	11.0-	3.0-	71.0	43.0	281.0	
	354.0-	548.0-	214.0-	269.0-	297.0-	540.0-	427.0-	217.0-	
	90.3	148.1	78.5	67.4	85.9	125.4	124.5	76.4	
T(Y)	71.3-	17.1-	6.1	51.6-	13.1	25.0	12.3	28.6-	
	47.0	217.0	118.0	30.0	161.0	422.0	472.0	8.0	
	308.0-	303.0-	60.0-	230.0-	253.0-	285.0-	237.0-	185.0-	
	93.5	82.5	37.8	70.0	77.1	100.3	134.1	35.8	

FEBRUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.8-	6.9-	4.3-	1.8-	3.7-	4.9-	6.2-	6.7-	
	3.9-	0.1-	6.8	3.4	4.0	0.1	1.9	4.0	
	12.1-	10.7-	11.1-	9.6-	11.1-	14.5-	11.1-	10.6-	
	2.9	3.0	5.4	3.9	4.7	4.2	2.8	2.5	
W(Y)	0.7-	1.0	0.2	3.4-	4.6-	3.7-	4.5-	3.4-	
	8.2	10.8	8.2	1.7	4.6	4.1	0.1-	1.4	
	6.7-	2.7-	6.0-	8.7-	10.6-	12.9-	10.1-	10.6-	
	3.3	3.3	3.3	3.1	3.8	2.8	2.3	2.5	
WSQ	4 2	4 3	3 3	3 3	3 3	3 3	4 3	3 3	
	81.1	69.3	58.8	39.3	71.0	63.1	71.8	68.7	
	166.0	117.0	166.0	106.0	199.0	238.0	128.0	128.0	
	17.0	7.0	2.0	1.0	0.0	1.0	10.0	26.0	
	49.3	36.2	43.7	30.0	49.9	60.3	34.2	24.7	
	27	23	26	21	29	43	32	47	
T(X)	187.0-	138.8-	108.1-	33.0-	98.4-	117.3-	129.0-	119.9-	
	18.0-	3.0-	76.0	32.0	124.0	4.0	52.0	124.0	
	437.0-	315.0-	360.0-	267.0-	405.0-	638.0-	348.0-	332.0-	
	146.3	107.1	125.7	69.0	144.0	168.0	103.7	81.6	
T(Y)	33.7-	26.3	13.4	47.3-	103.7-	68.3-	89.7-	62.4-	
	243.0	219.0	296.0	11.0	52.0	19.0	1.0-	24.0	
	185.0-	58.0-	141.0-	211.0-	393.0-	466.0-	280.0-	332.0-	
	87.0	86.0	86.0	63.1	107.8	93.3	70.1	68.3	

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.8-	4.7-	4.4-	4.3-	3.2-	3.3-	3.3-	4.0-	
	0.1	3.9	5.1	6.0	5.7	5.1	5.6	7.6	
	13.3-	10.6-	11.2-	10.3-	10.2-	8.9-	11.2-	9.6-	
	2.6	2.9	4.0	4.1	3.3	2.8	4.6	3.7	
W(Y)	3.1-	1.0-	1.6	0.0-	2.4-	2.0-	2.2-	1.5-	
	3.8	6.1	9.6	8.0	3.0	8.1	5.1	7.7	
	9.3-	9.0-	5.0-	7.0-	8.7-	12.1-	12.1-	8.7-	
	2.6	2.8	3.3	2.9	3.7	4.2	3.8	3.3	
WSQ	3 2	4 3	4 3	3 3	3 3	4 3	4 3	3 3	
	56.9	39.9	48.8	43.7	40.3	40.1	51.9	43.4	
	238.0	193.0	166.0	106.0	140.0	193.0	166.0	117.0	
	2.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	
	38.7	32.0	42.1	33.7	33.7	39.0	50.1	34.2	
	48	43	31	34	32	68	43	64	
T(X)	94.5-	58.9-	80.3-	71.5-	44.2-	46.9-	81.5-	66.0-	
	2.0	18.0	32.0	141.0	118.0	32.0	63.0	105.0	
	587.0-	417.0-	406.0-	285.0-	336.0-	348.0-	402.0-	267.0-	
	98.0	71.9	106.2	92.8	72.5	68.1	129.2	90.7	
T(Y)	67.9-	16.4-	33.4	2.0	46.2-	45.4-	55.7-	30.7-	
	53.0	49.0	267.0	187.0	27.0	141.0	58.0	134.0	
	346.0-	356.0-	69.0-	165.0-	205.0-	439.0-	439.0-	207.0-	
	73.9	59.5	77.8	53.6	70.0	99.4	99.7	62.3	

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.9-	5.8-	6.5-	7.6-	4.1-	4.5-	4.5-	3.8-	
	2.0	1.3-	0.8-	1.8-	8.1	4.8	4.0	2.9	
	9.8-	11.1-	13.0-	11.1-	10.2-	11.1-	10.6-	11.1-	
	2.6	2.6	3.4	2.1	4.5	4.6	3.8	3.4	
W(Y)	2.5-	1.7-	1.1-	1.9-	0.1	0.5-	0.5-	1.4-	
	6.5	4.4	4.4	5.3	7.5	8.6	7.5	11.6	
	9.7-	9.2-	6.7-	8.7-	5.2-	6.8-	4.2-	7.7-	
	3.4	3.6	2.8	3.1	3.9	3.4	3.2	3.9	
WSQ	4 3	4 3	4 3	3 3	3 3	4 3	4 3	2 3	
	48.4	56.5	62.9	75.9	51.6	53.7	44.5	42.9	
	128.0	166.0	193.0	166.0	114.0	147.0	128.0	140.0	
	4.0	4.0	1.0	10.0	2.0	0.0	0.0	2.0	
	30.3	36.9	48.9	30.6	28.6	45.1	37.9	31.0	
	50	42	32	25	33	53	26	51	
T(X)	72.3-	101.0-	136.3-	160.0-	67.1-	105.8-	79.8-	50.6-	
	5.0	3.0-	1.0-	10.0-	141.0	38.0	24.0	50.0	
	305.0-	402.0-	513.0-	402.0-	284.0-	348.0-	332.0-	365.0-	
	70.3	95.5	140.3	84.2	96.6	124.9	99.2	72.2	
T(Y)	32.4-	45.2-	33.7-	53.0-	13.1-	2.2-	3.2-	8.5-	
	181.0	36.0	27.0	44.0	102.0	269.0	221.0	384.0	
	268.0-	237.0-	192.0-	273.0-	145.0-	180.0-	124.0-	137.0-	
	74.6	73.3	63.4	76.7	55.2	78.2	64.9	77.2	

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.8-	7.4-	7.5-	7.1-	7.3-	6.4-	4.7-	4.4-	
	0.1	3.9-	0.7-	3.9-	1.4-	0.0	1.0	5.1	
	12.9-	12.9-	12.4-	11.1-	11.4-	11.7-	9.8-	10.3-	
	3.2	2.2	2.5	2.1	2.3	2.7	2.6	3.1	
W(Y)	3.4-	2.5-	1.6-	2.4-	1.6-	0.3	0.3	1.0-	
	0.8	1.3	1.8	0.8	2.5	7.0	9.0	4.0	
	10.7-	7.2-	6.7-	5.8-	6.4-	8.7-	5.0-	5.3-	
	2.4	2.2	2.3	2.3	2.6	3.4	3.3	2.1	
WSQ	4 3	4 3	4 2	3 3	3 3	4 3	4 3	2 3	
	73.7	71.4	70.7	65.8	68.4	60.0	39.6	34.2	
	166.0	166.0	153.0	140.0	139.0	153.0	140.0	106.0	
	4.0	26.0	1.0	17.0	17.0	0.0	2.0	1.0	
	39.9	30.6	34.4	37.5	31.5	37.2	32.0	25.8	
	56	34	29	20	23	48	26	55	
T(X)	149.7-	149.4-	153.6-	132.9-	145.9-	117.2-	58.8-	51.6-	
	0.0	24.0-	1.0-	19.0-	6.0-	0.0	8.0	31.0	
	466.0-	466.0-	427.0-	365.0-	372.0-	403.0-	253.0-	285.0-	
	124.4	103.6	106.5	107.9	96.4	105.6	69.8	63.5	
T(Y)	65.2-	41.1-	28.8-	53.8-	34.7-	7.6	10.6	11.3-	
	5.0	18.0	53.0	11.0	41.0	181.0	297.0	36.0	
	334.0-	145.0-	185.0-	186.0-	163.0-	273.0-	69.0-	145.0-	
	67.9	42.0	48.5	60.4	56.9	73.5	67.8	29.8	

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.3-	6.5-	7.3-	8.8-	7.8-	7.7-	6.0-	7.6-	
	1.7-	1.4-	4.1-	6.7-	4.4-	2.5-	3.5-	4.1-	
	11.1-	13.0-	12.1-	12.2-	10.9-	13.3-	9.3-	13.2-	
	2.4	2.6	2.1	1.5	1.5	2.9	1.5	1.6	
W(Y)	4.1-	4.0-	2.4-	1.9-	2.3-	2.1-	1.2-	0.0	
	0.1-	1.5-	0.0	3.6	9.0	3.4	3.5	4.8	
	7.4-	8.4-	5.3-	5.5-	8.7-	7.8-	3.9-	3.6-	
	1.9	1.7	1.6	1.9	4.0	2.3	1.8	2.2	
WSQ	4 2	4 3	4 3	4 3	3 3	4 3	4 3	2 3	
	66.0	66.9	67.2	87.1	84.9	77.5	43.7	65.9	
	140.0	193.0	166.0	152.0	140.0	238.0	86.0	179.0	
	7.0	17.0	17.0	52.0	26.0	7.0	13.0	17.0	
	34.4	42.1	38.1	26.7	25.0	54.1	20.0	27.6	
	45	35	25	27	35	43	41	57	
T(X)	121.4-	125.7-	138.6-	202.9-	175.0-	172.6-	70.4-	135.2-	
	6.0-	6.0-	19.0-	80.0-	27.0-	7.0-	14.0-	19.0-	
	385.0-	513.0-	437.0-	422.0-	339.0-	587.0-	217.0-	498.0-	
	92.2	118.5	111.7	93.2	73.5	156.1	49.3	89.2	
T(Y)	77.5-	70.7-	47.7-	38.4-	54.0-	50.3-	12.4-	0.6-	
	1.0-	11.0-	0.0	106.0	297.0	122.0	40.0	124.0	
	230.0-	303.0-	163.0-	149.0-	273.0-	346.0-	57.0-	100.0-	
	65.6	68.9	47.5	48.2	106.9	83.2	23.6	45.2	

JULY 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.0-	4.4-	6.4-	7.5-	7.5-	7.1-	7.0-	7.2-	
	3.8-	0.0	2.0-	2.0-	0.0	1.2	0.0	2.3-	
	7.8-	9.3-	9.6-	13.0-	17.8-	15.4-	14.2-	12.7-	
	1.2	3.0	1.7	2.1	2.1	2.5	2.2	2.2	
W(Y)	5.3-	3.0-	2.9-	2.2-	1.5-	1.8-	1.3-	0.0	
	3.3-	0.1-	1.7	2.6	4.9	5.9	4.6	7.8	
	6.7-	4.7-	7.2-	8.4-	6.7-	9.1-	7.9-	4.7-	
	1.0	1.4	2.1	2.0	2.1	2.3	2.6	2.4	
WSQ	4 2	4 3	3 4	4 4	3 3	2 3	3 3	3 2	
	66.6	38.9	56.8	69.1	68.0	65.9	61.9	62.1	
	106.0	86.0	106.0	193.0	325.0	238.0	208.0	166.0	
	26.0	10.0	17.0	7.0	0.0	17.0	0.0	13.0	
	22.4	25.1	22.6	34.1	33.9	40.8	34.7	34.2	
	17	8	22	101	180	71	92	67	
T(X)	138.9-	61.4-	97.7-	143.2-	141.4-	131.7-	120.4-	124.2-	
	24.0-	0.0	10.0-	6.0-	0.0	19.0	0.0	9.0-	
	217.0-	217.0-	267.0-	513.0-	921.0-	681.0-	581.0-	458.0-	
	59.1	72.6	64.6	104.0	106.4	125.0	105.5	107.8	
T(Y)	95.8-	21.9-	47.0-	40.6-	25.1-	33.1-	26.9-	2.6-	
	21.0-	2.0-	11.0	64.0	154.0	81.0	84.0	217.0	
	185.0-	52.0-	141.0-	303.0-	185.0-	311.0-	220.0-	110.0-	
	49.0	13.6	44.8	54.4	43.8	56.1	52.6	48.0	

AUGUST 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.5-	6.6-	6.9-	7.1-	7.4-	7.4-	6.0-	4.1-	
	1.3	3.9-	2.7-	1.0-	1.0-	1.5-	0.0	4.8	
	9.6-	10.3-	9.6-	11.8-	12.4-	16.5-	13.9-	13.9-	
	3.3	2.1	1.7	2.0	1.9	2.4	2.4	3.5	
W(Y)	3.6-	4.3-	1.9-	0.2-	0.2-	0.2-	0.3-	0.8	
	1.6-	0.1-	0.0	8.6	9.8	10.2	6.3	10.7	
	5.2-	7.2-	6.0-	5.2-	6.3-	5.3-	6.7-	5.3-	
	1.2	2.4	2.0	2.0	2.1	2.2	2.4	3.1	
WSQ	3 2	2 3	2 4	4 3	3 3	2 3	3 3	2 2	
	37.8	73.0	57.6	59.3	63.4	65.2	46.8	39.2	
	106.0	106.0	106.0	140.0	166.0	271.0	193.0	193.0	
	4.0	26.0	13.0	1.0	1.0	2.0	2.0	0.0	
	34.2	28.1	24.0	28.8	29.9	40.3	31.1	33.5	
	13	13	27	112	204	111	99	55	
T(X)	60.2-	137.0-	108.0-	118.4-	130.2-	138.4-	85.7-	52.4-	
	3.0	24.0-	11.0-	1.0-	1.0-	3.0-	0.0	118.0	
	267.0-	285.0-	267.0-	390.0-	437.0-	777.0-	548.0-	548.0-	
	87.8	88.4	64.5	85.9	90.6	121.5	88.4	88.9	
T(Y)	41.0-	82.0-	32.2-	1.9-	1.8-	6.0-	6.7-	11.1	
	4.0-	1.0-	0.0	269.0	354.0	335.0	107.0	334.0	
	145.0-	185.0-	141.0-	145.0-	217.0-	150.0-	185.0-	93.0-	
	41.4	65.3	45.9	42.7	48.6	54.1	36.5	56.9	

SEPTEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.7-	5.4-	2.7-	4.7-	5.8-	6.6-	5.9-	5.4-	
	0.0	1.7-	2.9	5.1	2.4	3.6	1.3	0.7	
	9.2-	9.8-	8.1-	14.7-	17.0-	12.9-	12.9-	12.4-	
	2.7	2.6	2.7	3.5	2.9	3.1	3.0	2.9	
W(Y)	3.3-	4.3-	1.3-	1.8-	1.4-	1.1-	1.8-	1.9-	
	0.1-	1.7	3.1	11.6	15.9	12.9	5.7	4.9	
	10.2-	17.5-	7.1-	11.7-	6.7-	9.6-	9.2-	9.2-	
	3.1	6.0	2.8	2.9	2.5	2.9	2.4	2.5	
WSQ	3 3	3 3	4 4	4 4	3 3	2 3	3 3	3 2	
	60.2	90.7	24.5	45.4	50.4	63.4	53.4	47.2	
	117.0	343.0	86.0	325.0	325.0	166.0	166.0	166.0	
	2.0	10.0	0.0	0.0	0.0	0.0	2.0	0.0	
	27.7	111.3	25.9	54.3	44.6	41.8	37.7	37.0	
	19	10	20	94	184	106	103	75	
T(X)	94.2-	128.6-	31.6-	80.6-	93.4-	125.0-	101.0-	84.7-	
	0.0	9.0-	10.0	31.0	7.0	100.0	3.0	1.0	
	235.0-	433.0-	165.0-	710.0-	880.0-	466.0-	466.0-	437.0-	
	68.9	161.7	51.4	140.4	113.0	122.5	109.6	103.0	
T(Y)	58.9-	179.1-	18.9-	26.0-	13.5-	23.2-	28.5-	29.8-	
	0.0	11.0	24.0	400.0	776.0	466.0	72.0	69.0	
	301.0-	932.0-	167.0-	606.0-	185.0-	303.0-	237.0-	237.0-	
	78.5	302.9	47.1	88.9	79.1	78.3	45.9	50.1	

OCTOBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.3-	3.7-	4.9-	5.7-	6.3-	6.6-	6.1-	6.8-	
	0.0	0.0	0.7	4.9	3.0	0.0	0.7	1.3	
	7.1-	7.1-	8.2-	11.3-	13.0-	11.3-	12.9-	12.9-	
	2.3	2.0	2.2	2.6	2.7	2.5	2.4	2.6	
W(Y)	2.3-	3.1-	3.2-	1.2-	1.0-	1.0-	1.0-	0.1-	
	5.8	0.5-	0.0	4.0	7.9	4.6	4.1	9.2	
	6.0-	6.0-	7.9-	6.4-	6.7-	9.4-	10.7-	6.7-	
	2.9	1.6	2.6	2.3	2.5	2.5	2.5	3.0	
WSQ	4 3	2 3	3 4	4 4	3 3	2 3	2 3	3 2	
	29.5	29.9	45.4	45.7	54.2	57.5	50.8	62.8	
	60.0	68.0	106.0	128.0	193.0	208.0	166.0	166.0	
	0.0	7.0	4.0	0.0	0.0	0.0	4.0	4.0	
	16.9	22.1	28.0	25.4	32.2	35.1	32.8	36.5	
	13	11	18	99	205	113	114	86	
T(X)	28.8-	35.6-	63.4-	76.4-	104.5-	113.8-	93.1-	125.1-	
	0.0	0.0	2.0	38.0	18.0	0.0	2.0	6.0	
	79.0-	123.0-	217.0-	354.0-	513.0-	449.0-	466.0-	466.0-	
	26.0	36.1	59.3	68.0	90.1	96.4	89.2	109.5	
T(Y)	17.8-	29.7-	47.4-	18.3-	15.6-	21.1-	19.1-	0.9-	
	46.0	1.0-	0.0	53.0	272.0	106.0	118.0	235.0	
	33.0-	83.0-	220.0-	155.0-	192.0-	334.0-	334.0-	185.0-	
	27.8	31.1	62.3	36.3	49.1	58.8	55.4	62.7	

NOVEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.4-	5.9-	4.4-	4.8-	5.0-	5.7-	4.0-	3.4-	
	3.1	0.1	7.0	6.5	3.9	2.7	10.7	11.1	
	15.4-	12.1-	11.3-	12.1-	12.0-	11.4-	12.4-	12.9-	
	5.1	4.2	4.8	3.5	3.2	3.2	3.9	4.8	
W(Y)	2.8-	1.9-	0.2-	0.2-	0.0	0.7-	0.3	1.1	
	1.3	1.0	6.2	8.2	7.8	6.3	8.2	13.5	
	8.0-	6.2-	8.2-	13.1-	13.1-	25.7-	9.7-	10.2-	
	3.1	2.0	3.2	4.3	3.7	4.5	4.0	4.6	
WSQ	3 2	3 3	3 4	4 3	3 3	2 3	2 3	3 2	
	72.8	59.1	53.9	54.5	48.4	63.7	47.8	57.7	
	271.0	153.0	128.0	193.0	193.0	662.0	153.0	238.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	75.7	52.4	38.9	40.1	37.1	78.3	31.0	55.2	
	17	12	30	118	181	72	92	79	
T(X)	153.2-	130.7-	71.3-	78.1-	77.6-	100.4-	55.4-	61.9-	
	11.0	0.0	207.0	237.0	27.0	17.0	315.0	456.0	
	728.0-	420.0-	354.0-	437.0-	417.0-	382.0-	427.0-	466.0-	
	202.8	162.1	130.9	95.1	87.5	94.1	92.6	142.5	
T(Y)	80.8-	23.0-	17.2-	23.7-	13.4-	39.9-	2.4	36.1	
	13.0	8.0	95.0	217.0	217.0	109.0	165.0	587.0	
	278.0-	78.0-	243.0-	516.0-	516.0-	1921.0-	268.0-	385.0-	
	138.3	28.4	71.0	109.2	89.2	232.8	68.7	139.0	

DECEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.6-	6.4-	6.3-	2.6-	1.5-	0.3-	0.2	0.7-	
	1.0-	4.0-	1.0	13.9	12.9	11.1	11.7	11.2	
	4.0-	9.6-	10.8-	17.0-	8.6-	8.8-	8.2-	14.5-	
	1.2	1.7	2.7	4.8	4.0	4.3	4.6	4.6	
W(Y)	3.6-	1.2-	0.1-	3.6	2.5	0.4	2.0-	2.3-	
	3.3	1.9	2.9	12.9	14.0	9.6	5.6	9.7	
	7.3-	5.0-	5.7-	7.3-	13.9-	13.5-	14.9-	13.3-	
	4.4	2.1	2.0	3.9	4.5	3.9	3.5	4.7	
WSQ	2 2	1 3	2 4	4 4	3 3	2 3	2 3	3 3	
	40.9	49.1	50.9	57.7	45.1	33.6	37.7	48.8	
	80.0	106.0	117.0	325.0	214.0	208.0	255.0	238.0	
	26.0	21.0	7.0	0.0	0.0	0.0	0.0	0.0	
	13.1	25.3	30.5	51.1	43.5	38.5	46.6	51.6	
	7	10	26	109	174	110	101	77	
T(X)	24.3-	85.8-	99.8-	39.5-	13.9-	6.5	26.2	0.3-	
	8.0-	22.0-	4.0	548.0	466.0	365.0	441.0	414.0	
	53.0-	267.0-	319.0-	880.0-	217.0-	348.0-	187.0-	638.0-	
	14.9	71.7	87.7	151.3	90.4	85.0	106.6	125.5	
T(Y)	42.7-	22.6-	4.8-	68.5	37.9	0.3	39.2-	56.2-	
	20.0	13.0	47.0	477.0	582.0	303.0	100.0	268.0	
	101.0-	100.0-	118.0-	101.0-	548.0-	553.0-	682.0-	587.0-	
	44.5	34.1	31.4	101.8	122.9	93.1	102.4	125.1	

JANUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.4-	8.3-	8.7-	7.4-	7.4-	6.6-	6.7-	6.1-	
	3.1	5.8-	3.3-	1.7	3.9	8.7	5.0	2.3	
	14.5-	12.1-	15.4-	14.9-	17.5-	15.2-	17.4-	12.4-	
	4.4	1.9	3.2	3.4	3.8	4.7	4.3	3.3	
W(Y)	3.2-	1.4-	1.9-	0.2-	0.4-	1.5-	3.0-	3.9-	
	1.3	1.3	4.3	10.2	15.4	7.8	5.8	7.8	
	8.2-	4.5-	11.1-	9.0-	12.1-	9.9-	10.3-	11.2-	
	2.6	1.6	3.2	3.9	4.0	3.7	3.6	3.8	
WSQ	4 2	4 3	3 4	3 3	3 3	2 3	2 3	2 3	
	64.7	76.7	99.3	81.9	86.3	81.5	85.1	77.4	
	238.0	166.0	238.0	238.0	325.0	238.0	343.0	238.0	
	1.0	38.0	17.0	2.0	0.0	1.0	0.0	0.0	
	55.2	38.8	63.6	57.9	65.1	60.7	71.2	54.6	
	17	13	35	130	183	74	91	72	
T(X)	116.5-	164.6-	230.9-	177.9-	187.1-	169.5-	180.7-	145.0-	
	63.0	46.0-	19.0-	47.0	26.0	235.0	69.0	22.0	
	638.0-	437.0-	681.0-	635.0-	880.0-	670.0-	926.0-	518.0-	
	165.3	125.2	187.4	179.6	186.2	189.9	204.5	135.3	
T(Y)	58.1-	34.3-	55.6-	2.0	11.4-	43.8-	79.5-	95.2-	
	4.0	18.0	95.0	354.0	681.0	217.0	143.0	217.0	
	239.0-	163.0-	456.0-	356.0-	477.0-	360.0-	391.0-	442.0-	
	73.3	46.6	108.6	109.4	127.9	93.3	107.6	125.9	

FEBRUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	7.5-	8.4-	7.1-	7.0-	7.5-	7.6-	6.4-	5.6-	
	3.9-	6.5-	6.0	2.9	3.9	2.4	0.8	2.6	
	21.7-	9.8-	11.6-	16.9-	20.2-	17.7-	12.7-	12.9-	
	4.3	1.1	3.4	3.0	3.8	3.3	2.9	3.7	
W(Y)	4.5-	6.5-	2.7-	1.3-	0.6-	1.5-	0.9-	0.3-	
	0.0	1.7-	3.8	5.9	9.8	9.8	6.6	8.9	
	8.1-	19.4-	8.0-	10.2-	7.9-	10.0-	9.7-	9.1-	
	2.5	5.4	2.4	3.4	3.3	3.0	3.2	3.2	
WSQ	2 3	2 3	2 4	3 3	3 3	2 3	2 3	2 2	
	101.2	144.0	75.0	71.4	82.2	80.0	60.0	54.7	
	537.0	424.0	179.0	325.0	424.0	325.0	166.0	166.0	
	17.0	68.0	21.0	7.0	0.0	0.0	4.0	2.0	
	129.4	109.7	38.7	49.8	60.1	55.6	42.1	42.3	
	13	9	30	121	211	125	124	99	
T(X)	219.8-	251.0-	150.8-	146.0-	183.8-	179.7-	119.1-	107.5-	
	19.0-	134.0-	83.0	50.0	24.0	7.0	5.0	12.0	
	1455.0-	433.0-	436.0-	874.0-	1204.0-	918.0-	460.0-	466.0-	
	363.1	96.7	122.8	147.4	185.0	162.6	122.1	120.9	
T(Y)	124.4-	263.2-	55.2-	31.3-	20.7-	34.5-	25.4-	13.3-	
	0.0	40.0-	53.0	174.0	354.0	305.0	140.0	245.0	
	544.0-	1154.0-	278.0-	442.0-	327.0-	442.0-	268.0-	301.0-	
	139.3	345.6	70.9	85.8	77.5	88.3	69.0	60.9	

MARCH 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.6-	7.3-	8.9-	8.1-	7.6-	6.9-	5.1-	6.4-	
	9.4	4.5	0.1	4.0	4.4	7.6	8.2	3.2	
	8.7-	12.7-	15.4-	15.4-	18.0-	15.9-	13.7-	15.2-	
	4.9	4.1	3.1	4.3	4.1	4.1	4.2	3.9	
W(Y)	3.6-	3.3-	1.6-	0.2-	0.4	0.0	1.3-	0.8-	
	2.4	3.5	5.5	7.1	8.7	8.2	8.0	7.8	
	9.4-	14.4-	12.9-	11.2-	12.5-	7.7-	13.6-	12.5-	
	2.8	4.2	3.1	3.3	3.6	3.3	3.8	3.7	
WSQ	4 4	2 3	3 4	4 3	3 3	2 3	3 3	3 2	
	52.5	99.3	101.9	94.5	86.6	74.7	60.2	70.1	
	117.0	208.0	238.0	239.0	325.0	289.0	208.0	238.0	
	0.0	7.0	26.0	7.0	0.0	2.0	1.0	0.0	
	42.2	50.7	53.0	58.5	58.6	52.1	49.1	54.7	
	16	21	39	143	237	144	136	114	
T(X)	47.6-	185.8-	237.4-	222.7-	196.3-	161.7-	106.5-	147.9-	
	278.0	163.0	4.0	53.0	27.0	135.0	143.0	76.0	
	217.0-	458.0-	681.0-	681.0-	933.0-	776.0-	539.0-	670.0-	
	119.6	151.8	168.8	187.9	180.6	164.3	133.4	154.3	
T(Y)	72.7-	113.7-	46.1-	5.5-	10.4	4.4-	44.4-	34.2-	
	7.0	36.0	106.0	291.0	335.0	243.0	187.0	217.0	
	278.0-	591.0-	466.0-	406.0-	514.0-	290.0-	557.0-	514.0-	
	83.7	147.2	98.2	79.2	88.0	69.3	100.7	97.3	

APRIL 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.0-	7.5-	7.0-	8.0-	7.8-	7.4-	6.6-	6.2-	
	2.0	4.0-	1.5-	1.3-	3.1	3.5	6.0	8.2	
	7.8-	11.6-	14.5-	13.7-	15.4-	16.4-	13.5-	13.3-	
	2.7	2.1	3.0	2.4	2.3	3.5	3.7	4.0	
W(Y)	5.1-	3.7-	3.2-	1.1-	0.1	0.1	1.5-	2.0-	
	2.3-	0.1-	1.7	6.5	8.7	8.3	10.2	6.3	
	7.8-	8.4-	9.9-	5.7-	7.1-	7.1-	9.0-	15.7-	
	1.7	2.4	2.3	2.4	3.0	3.7	3.6	4.1	
WSQ	3 2	3 3	2 3	4 3	3 3	2 3	2 3	3 2	
	61.6	81.3	73.5	77.0	75.2	80.8	73.5	74.9	
	106.0	166.0	238.0	193.0	238.0	306.0	208.0	325.0	
	10.0	17.0	2.0	3.0	0.0	1.0	0.0	0.0	
	28.7	48.2	49.5	39.2	35.2	51.9	43.8	60.1	
	17	14	33	138	208	120	114	73	
T(X)	93.2-	164.0-	154.5-	174.0-	164.0-	178.9-	151.9-	142.2-	
	7.0	19.0-	3.0-	4.0-	72.0	14.0	83.0	171.0	
	217.0-	400.0-	638.0-	539.0-	681.0-	824.0-	553.0-	587.0-	
	74.7	127.5	137.3	123.6	111.9	156.1	132.7	156.1	
T(Y)	88.6-	91.2-	70.1-	23.4-	0.3-	5.3-	36.1-	58.8-	
	8.0-	1.0-	11.0	181.0	210.0	243.0	281.0	143.0	
	185.0-	303.0-	360.0-	177.0-	237.0-	308.0-	273.0-	812.0-	
	63.1	98.1	72.0	54.7	69.1	91.3	85.9	133.5	

MAY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.6-	5.7-	7.7-	7.5-	7.9-	7.6-	7.5-	7.0-	
	0.8-	3.6-	2.7-	5.7	0.5-	5.6	0.0	8.2	
	6.5-	8.2-	20.6-	16.4-	13.4-	15.2-	15.4-	17.0-	
	1.5	1.4	3.1	4.0	2.8	3.5	2.5	3.3	
W(Y)	4.8-	4.5-	2.3-	1.9-	1.3-	1.0-	0.3	1.6	
	1.3-	0.0	3.3	6.6	5.2	4.3	8.1	11.6	
	7.9-	7.0-	7.8-	8.6-	8.2-	7.4-	6.0-	7.8-	
	1.3	1.8	2.4	2.5	2.1	2.1	2.8	3.6	
WSQ	3 2	1 3	2 3	3 3	3 3	2 3	2 3	3 2	
	48.2	57.7	79.3	81.6	77.4	75.5	71.4	75.8	
	106.0	117.0	424.0	306.0	186.0	238.0	238.0	289.0	
	13.0	21.0	21.0	0.0	0.0	0.0	0.0	4.0	
	22.6	28.1	71.7	58.7	44.2	52.9	38.7	41.6	
	21	14	35	137	205	87	130	103	
T(X)	60.1-	91.3-	169.3-	187.5-	179.9-	176.1-	149.1-	146.9-	
	4.0-	22.0-	23.0-	40.0	0.0	44.0	0.0	143.0	
	181.0-	243.0-	1224.0-	824.0-	518.0-	672.0-	681.0-	828.0-	
	43.3	65.5	218.9	171.8	134.4	160.9	125.1	129.5	
T(Y)	62.0-	76.0-	46.0-	50.8-	31.3-	20.9-	3.3	35.6	
	5.0-	0.0	31.0	118.0	140.0	156.0	181.0	384.0	
	220.0-	207.0-	278.0-	420.0-	180.0-	230.0-	163.0-	185.0-	
	46.6	59.3	61.7	77.9	55.9	54.7	55.0	94.4	

JUNE 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.6-	7.2-	6.1-	6.6-	6.5-	6.5-	6.1-	5.5-	
	0.4-	2.3-	1.0	6.6	8.1	6.2	5.0	3.1	
	10.1-	10.3-	11.1-	14.7-	14.5-	15.4-	12.2-	11.6-	
	2.5	2.8	2.8	3.8	4.2	4.2	3.6	3.8	
W(Y)	3.5-	2.0-	1.9-	1.1-	0.5-	1.2-	0.3-	0.6	
	0.1-	0.0	10.6	7.2	7.0	6.3	8.4	9.1	
	7.3-	6.7-	9.0-	10.8-	7.6-	9.9-	6.0-	5.7-	
	2.0	1.9	3.2	2.6	2.6	2.8	3.1	3.4	
WSQ	3 2	2 3	3 4	4 4	3 3	2 3	3 3	3 2	
	43.1	68.4	59.7	66.7	66.1	69.6	59.2	56.9	
	106.0	106.0	193.0	223.0	238.0	271.0	166.0	140.0	
	7.0	10.0	0.0	0.0	0.0	0.0	1.0	0.0	
	26.7	39.9	43.4	46.3	47.1	52.0	40.6	38.5	
	21	8	36	133	222	115	104	73	
T(X)	63.1-	154.6-	114.3-	139.1-	143.1-	152.7-	120.8-	106.8-	
	1.0-	8.0-	1.0	69.0	189.0	118.0	69.0	72.0	
	283.0-	285.0-	356.0-	624.0-	638.0-	728.0-	437.0-	384.0-	
	67.2	115.7	102.8	141.1	145.3	153.9	122.5	115.2	
T(Y)	40.2-	41.2-	32.6-	31.0-	18.4-	32.7-	11.9-	0.5-	
	1.0-	3.0	417.0	80.0	109.0	109.0	216.0	214.0	
	118.0-	185.0-	248.0-	372.0-	239.0-	330.0-	163.0-	180.0-	
	37.5	57.7	102.6	60.3	49.7	68.7	57.4	66.5	

JULY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.5-	6.1-	6.3-	7.4-	7.7-	7.6-	7.9-	7.2-	
	0.2	0.1	1.8	0.1	1.6-	2.5	0.0	1.6-	
	9.3-	9.6-	10.1-	13.0-	13.5-	13.5-	15.4-	12.9-	
	3.2	2.6	2.3	2.2	2.1	2.7	2.5	2.4	
W(Y)	7.0-	4.7-	4.2-	3.1-	2.3-	2.6-	2.1-	1.3-	
	3.1	8.2	0.1-	2.9	4.1	2.9	2.8	3.3	
	18.0-	11.3-	10.2-	9.4-	9.0-	8.6-	9.7-	15.7-	
	4.9	3.7	1.7	2.3	2.2	2.5	2.3	2.5	
WSQ	3 3	2 3	3 3	4 3	3 3	2 3	3 3	3 2	
	104.9	78.6	65.8	75.1	74.0	77.9	77.9	65.3	
	325.0	128.0	117.0	193.0	208.0	208.0	271.0	255.0	
	17.0	26.0	26.0	7.0	7.0	0.0	0.0	7.0	
	71.0	27.5	26.9	35.7	36.7	38.2	42.6	39.9	
	22	25	39	117	211	137	101	87	
T(X)	92.8-	127.1-	115.7-	155.4-	158.3-	166.9-	170.6-	129.8-	
	8.0	3.0	11.0	1.0	7.0-	28.0	0.0	5.0-	
	245.0-	267.0-	299.0-	513.0-	553.0-	553.0-	728.0-	466.0-	
	88.4	87.2	81.6	102.4	109.8	118.4	129.2	103.6	
T(Y)	217.0-	95.1-	71.2-	67.4-	51.3-	57.3-	48.1-	32.2-	
	15.0	243.0	2.0-	30.0	70.0	48.0	36.0	60.0	
	933.0-	354.0-	301.0-	356.0-	356.0-	303.0-	303.0-	719.0-	
	239.0	105.6	57.0	69.1	64.0	64.3	66.5	85.2	

AUGUST 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.9-	4.1-	6.6-	6.1-	6.8-	7.0-	7.3-	7.5-	
	1.5-	1.1	1.7-	1.5-	0.6	0.0	4.7	2.2-	
	8.7-	8.9-	12.9-	13.9-	13.9-	12.9-	13.9-	13.9-	
	1.8	2.3	2.5	2.3	2.2	2.5	2.6	2.5	
W(Y)	3.0-	3.3-	3.2-	1.6-	0.7-	1.5-	1.6-	0.9-	
	3.1	1.7-	0.1-	4.9	8.2	5.9	5.1	7.1	
	5.3-	5.2-	8.0-	8.2-	6.0-	9.0-	6.0-	6.0-	
	2.0	1.0	2.0	1.9	2.3	2.3	2.0	2.4	
WSQ	3 3	3 3	2 3	4 3	3 3	2 3	2 3	3 2	
	31.1	34.2	64.0	49.2	57.5	62.8	67.4	68.5	
	86.0	106.0	166.0	193.0	193.0	208.0	193.0	193.0	
	13.0	7.0	3.0	2.0	4.0	0.0	0.0	7.0	
	18.4	25.2	40.1	33.3	31.4	37.2	39.2	39.9	
	23	17	31	139	228	106	138	92	
T(X)	37.2-	47.1-	125.0-	89.9-	110.9-	128.3-	143.2-	146.4-	
	8.0-	4.0	3.0-	2.0-	2.0	0.0	38.0	6.0-	
	203.0-	245.0-	466.0-	548.0-	548.0-	509.0-	548.0-	548.0-	
	44.9	61.3	106.4	94.5	94.1	107.7	121.7	124.0	
T(Y)	25.4-	33.1-	62.5-	23.4-	10.3-	26.1-	29.7-	13.1-	
	15.0	5.0-	0.0	68.0	296.0	115.0	140.0	156.0	
	93.0-	145.0-	278.0-	192.0-	145.0-	356.0-	192.0-	192.0-	
	24.3	35.5	68.6	35.5	42.6	57.9	46.6	51.1	

SEPTEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.6-	6.0-	6.2-	7.5-	7.6-	7.0-	6.3-	6.1-	
	0.0	2.0-	1.0-	2.0-	0.0	1.7	2.2	0.0	
	11.6-	11.5-	10.1-	11.3-	12.9-	11.8-	12.1-	11.1-	
	3.3	2.3	2.3	2.1	2.1	2.5	3.1	3.1	
W(Y)	3.1-	3.7-	2.3-	1.7-	0.7-	1.4-	0.6-	1.2-	
	0.0	2.2-	4.4	4.9	6.7	6.3	10.6	7.7	
	6.7-	8.1-	6.7-	8.4-	7.1-	11.2-	6.7-	10.2-	
	1.9	2.1	2.3	2.0	2.1	3.4	3.3	3.2	
WSQ	3 3	3 4	3 3	4 3	3 3	2 3	3 3	3 2	
	45.7	59.0	55.0	68.4	66.9	69.7	60.6	58.5	
	153.0	179.0	117.0	166.0	179.0	161.0	166.0	166.0	
	0.0	10.0	2.0	4.0	0.0	13.0	0.0	2.0	
	43.8	46.2	33.4	33.5	31.9	35.9	34.7	38.8	
	12	9	25	120	210	107	91	63	
T(X)	83.2-	95.9-	103.8-	145.7-	140.6-	139.5-	116.9-	112.5-	
	0.0	7.0-	2.0-	5.0-	0.0	11.0	8.0	0.0	
	400.0-	436.0-	280.0-	364.0-	474.0-	400.0-	437.0-	365.0-	
	114.2	122.6	90.3	103.2	102.4	106.9	102.4	107.8	
T(Y)	49.1-	66.0-	43.9-	34.0-	13.9-	40.3-	14.2-	29.7-	
	0.0	9.0-	27.0	68.0	143.0	109.0	314.0	107.0	
	185.0-	257.0-	185.0-	303.0-	177.0-	368.0-	185.0-	303.0-	
	60.0	85.8	56.1	49.3	43.3	79.3	67.8	73.2	

OCTOBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.0-	5.3-	6.0-	4.9-	6.4-	6.7-	7.8-	8.0-	
	5.0	0.0	2.7	7.5	4.4	3.9	4.0	3.3-	
	7.6-	13.4-	12.9-	12.9-	17.0-	15.5-	12.9-	15.7-	
	3.2	3.9	4.5	3.8	3.5	3.3	3.2	2.7	
W(Y)	2.1-	0.8-	1.4-	2.2-	2.4-	2.5-	2.4-	1.9-	
	5.9	4.1	7.8	9.6	10.1	7.2	2.3	11.1	
	7.8-	5.8-	12.6-	12.7-	13.4-	10.8-	13.4-	13.4-	
	3.2	2.9	5.2	4.4	3.3	3.1	2.8	4.1	
WSQ	3 3	3 3	3 4	4 4	3 3	2 3	2 3	3 2	
	40.3	52.7	84.8	62.8	69.4	72.2	84.8	91.5	
	68.0	179.0	179.0	193.0	325.0	325.0	238.0	424.0	
	2.0	0.0	10.0	4.0	0.0	0.0	0.0	17.0	
	18.0	46.5	54.0	38.9	49.0	53.5	48.8	66.6	
	22	18	23	138	235	168	105	68	
T(X)	39.1-	105.5-	158.4-	93.0-	132.1-	149.1-	189.5-	195.7-	
	69.0	0.0	48.0	156.0	150.0	18.0	24.0	17.0-	
	135.0-	506.0-	466.0-	466.0-	828.0-	804.0-	466.0-	931.0-	
	39.6	140.9	166.3	106.5	140.0	147.6	138.9	168.0	
T(Y)	23.2-	1.3-	53.4-	47.7-	53.4-	53.1-	61.3-	67.5-	
	81.0	70.0	135.0	267.0	280.0	225.0	30.0	402.0	
	135.0-	48.0-	477.0-	458.0-	593.0-	474.0-	593.0-	795.0-	
	41.9	30.6	129.9	104.9	93.1	98.0	93.4	154.6	

NOVEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.8-	5.5-	5.9-	5.8-	5.8-	4.9-	5.5-	4.4-	
	2.1-	0.7	3.1	7.2	8.2	9.8	12.1	11.6	
	8.2-	10.2-	10.3-	14.5-	17.7-	15.4-	16.9-	14.4-	
	1.9	2.7	3.0	4.2	5.4	6.0	6.8	6.6	
W(Y)	1.9-	0.6-	1.3-	0.2-	0.4	0.1-	0.4-	0.1-	
	6.2	4.6	9.1	12.1	16.1	11.6	12.4	8.1	
	7.0-	6.0-	7.6-	11.2-	12.0-	11.7-	9.1-	9.0-	
	3.1	2.7	3.7	5.2	5.1	5.3	4.4	3.2	
WSQ	3 2	2 3	2 3	4 3	3 3	2 3	3 3	3 2	
	50.4	44.9	59.0	78.7	88.9	88.4	97.4	73.5	
	117.0	140.0	128.0	238.0	343.0	271.0	325.0	208.0	
	10.0	15.0	7.0	0.0	0.0	3.0	1.0	0.0	
	26.0	37.0	32.5	50.4	60.4	63.0	60.8	53.5	
	20	15	47	125	209	132	136	83	
T(X)	82.0-	84.4-	107.9-	139.5-	159.1-	146.9-	177.8-	121.1-	
	10.0-	4.0	25.0	225.0	243.0	354.0	439.0	384.0	
	243.0-	336.0-	285.0-	604.0-	918.0-	728.0-	874.0-	591.0-	
	60.6	96.2	86.2	149.3	193.9	206.7	226.2	197.9	
T(Y)	35.0-	16.6-	24.6-	19.0-	5.8-	12.5-	18.0-	9.3-	
	69.0	107.0	217.0	420.0	741.0	385.0	454.0	141.0	
	207.0-	198.0-	230.0-	456.0-	642.0-	442.0-	346.0-	356.0-	
	55.0	63.4	80.2	137.1	150.5	153.8	126.5	72.4	

DECEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.0-	6.6-	5.2-	4.5-	4.2-	3.8-	0.5-	1.5	
	2.3-	2.0-	4.7	11.1	8.8	9.6	16.9	18.0	
	10.8-	11.0-	12.0-	13.7-	13.1-	14.9-	13.6-	15.9-	
	2.3	2.7	2.9	4.3	4.8	5.6	7.3	7.9	
W(Y)	2.9-	1.0	1.2	2.4	3.2	1.6	3.0	2.1	
	0.8	6.7	9.3	15.4	17.0	16.0	20.3	15.4	
	6.7-	9.4-	7.1-	6.7-	8.1-	9.2-	12.1-	9.8-	
	1.9	3.9	3.5	4.1	4.4	5.3	5.6	4.6	
WSQ	3 3	3 3	3 3	3 3	3 3	3 3	2 3	3 3	
	53.1	68.4	49.2	61.3	71.1	76.5	94.4	90.6	
	117.0	208.0	193.0	306.0	325.0	289.0	467.0	325.0	
	13.0	7.0	10.0	0.0	0.0	0.0	2.0	1.0	
	27.6	44.1	32.3	47.2	51.9	58.5	78.7	75.3	
	25	21	48	148	202	89	118	85	
T(X)	90.0-	135.3-	72.1-	71.1-	72.9-	76.7-	8.6	66.7	
	9.0-	6.0-	38.0	563.0	348.0	408.0	874.0	933.0	
	319.0-	449.0-	472.0-	539.0-	516.0-	635.0-	557.0-	776.0-	
	33.9	114.6	88.7	120.9	138.6	166.2	252.4	278.2	
T(Y)	36.2-	5.3-	8.2	46.4	80.6	52.9	87.7	44.4	
	5.0	115.0	245.0	681.0	880.0	780.0	1266.0	681.0	
	112.0-	384.0-	278.0-	185.0-	192.0-	303.0-	439.0-	354.0-	
	31.8	104.7	73.7	129.7	148.2	171.9	210.3	144.6	

JANUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.4-	5.7-	2.6-	2.6-	1.2-	2.2-	0.4-	1.0	
	1.0-	1.6	12.0	13.2	19.4	11.6	12.9	16.5	
	12.7-	13.7-	10.7-	17.7-	14.2-	14.9-	12.1-	11.1-	
	3.7	4.5	5.7	5.3	6.3	6.2	6.3	6.2	
W(Y)	1.9-	0.0-	2.2	3.1	1.6	0.8-	2.5-	2.1-	
	3.3	6.7	12.1	18.0	11.2	10.3	15.4	8.4	
	6.7-	10.0-	8.4-	12.7-	19.3-	21.7-	16.4-	13.3-	
	2.7	4.4	4.0	4.8	6.0	6.2	5.5	4.5	
WSQ	3 3	2 3	3 3	4 4	3 3	2 3	2 3	3 3	
	65.1	71.9	59.6	67.7	80.5	82.3	75.7	64.8	
	166.0	238.0	193.0	325.0	537.0	537.0	306.0	271.0	
	7.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	
	48.5	66.6	51.1	56.6	82.3	84.9	63.3	59.6	
	29	26	36	145	215	122	141	119	
T(X)	134.8-	149.8-	63.8-	60.6-	5.6-	50.2-	15.9-	44.5	
	4.0-	9.0	472.0	458.0	1154.0	544.0	466.0	777.0	
	458.0-	542.0-	354.0-	918.0-	587.0-	635.0-	437.0-	417.0-	
	149.3	183.5	147.8	149.3	230.1	199.9	176.4	180.5	
T(Y)	30.4-	3.6-	44.4	57.1	7.2-	62.4-	71.0-	43.0-	
	58.0	230.0	437.0	933.0	382.0	305.0	681.0	303.0	
	163.6-	442.0-	303.0-	460.0-	1181.0-	1455.0-	824.0-	587.0-	
	49.3	119.8	121.0	156.8	216.6	247.8	187.4	141.0	

FEBRUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	5.7-	8.0-	3.4-	1.5-	1.0-	2.7-	4.2-	3.7-	
	0.1	0.8	19.3	17.7	21.8	9.9	3.2	6.7	
	9.6-	14.4-	14.4-	14.6-	15.4-	12.9-	13.7-	11.1-	
	2.5	4.1	7.7	6.4	6.0	4.6	3.3	3.6	
W(Y)	1.7-	0.1	3.2	0.6-	4.6-	5.2-	5.1-	4.4-	
	3.9	5.6	17.9	12.2	10.3	11.2	6.8	5.7	
	9.3-	7.4-	7.8-	15.4-	21.8-	13.5-	14.4-	16.0-	
	3.6	3.1	4.9	6.3	6.5	3.8	4.3	4.2	
WSQ	3 3	3 2	4 3	4 3	3 3	2 3	2 3	3 2	
	54.5	90.5	105.8	83.9	100.7	69.2	72.4	63.9	
	117.0	208.0	537.0	325.0	585.0	193.0	255.0	289.0	
	7.0	2.0	4.0	0.0	0.0	4.0	0.0	0.0	
	32.0	56.9	92.7	62.1	101.9	45.9	54.7	61.9	
	29	26	52	162	226	104	108	60	
T(X)	89.6-	223.7-	76.4-	23.9-	0.7	50.7-	93.3-	80.0-	
	2.0	5.0	1147.0	918.0	1464.0	360.0	17.0	138.0	
	275.0-	591.0-	591.0-	642.0-	710.0-	466.0-	628.0-	402.0-	
	84.6	172.0	311.9	214.0	245.3	119.7	113.3	116.2	
T(Y)	46.0-	18.1-	107.2	6.6-	162.3-	111.3-	127.1-	107.2-	
	24.0	115.0	1199.0	474.0	391.0	368.0	71.0	118.0	
	217.0-	230.0-	217.0-	681.0-	1464.0-	525.0-	591.0-	780.0-	
	74.9	73.5	200.5	182.3	273.6	132.6	144.5	161.4	

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.6-	5.0-	4.3-	2.8-	2.0-	1.5-	1.6-	2.2-	
	1.3	0.1	7.8	11.0	12.9	10.5	9.7	10.2	
	7.0-	11.2-	15.2-	13.5-	13.4-	11.8-	10.6-	11.1-	
	2.6	3.6	5.0	6.1	5.3	4.7	4.0	4.9	
W(Y)	3.2-	0.3	2.9	0.2	0.6-	1.5-	1.8-	1.7-	
	7.6	9.3	11.1	10.9	12.3	8.4	11.7	9.7	
	7.7-	9.3-	2.8-	12.1-	10.7-	12.9-	10.8-	9.9-	
	3.3	5.2	3.8	4.9	4.6	4.2	4.6	5.0	
WSQ	3 3	3 3	3 3	4 3	3 3	2 3	2 3	3 3	
	40.9	65.1	66.4	68.1	53.4	44.0	43.1	56.9	
	86.0	166.0	238.0	223.0	238.0	166.0	153.0	166.0	
	10.0	4.0	0.0	4.0	0.0	0.0	2.0	0.0	
	20.3	38.8	56.4	44.5	44.5	37.1	33.4	36.4	
	16	15	34	119	240	122	153	121	
T(X)	39.4-	96.7-	101.5-	63.2-	49.3-	15.7-	26.0-	38.1-	
	18.0	2.0	217.0	361.0	466.0	354.0	268.0	284.0	
	169.0-	406.0-	670.0-	553.0-	587.0-	390.0-	368.0-	365.0-	
	47.2	112.5	161.8	162.0	133.4	99.7	81.6	114.9	
T(Y)	35.2-	0.9-	66.0	3.6-	10.2-	30.2-	34.7-	35.5-	
	105.0	230.0	402.0	331.0	439.0	303.0	385.0	273.0	
	141.0-	217.0-	124.0-	439.0-	346.0-	466.0-	372.0-	360.0-	
	53.5	120.8	112.6	117.1	103.9	90.5	89.3	105.9	

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.3-	3.6-	2.9-	4.5-	5.5-	4.6-	3.8-	4.0-	
	0.6	3.5	5.1	9.7	7.6	10.6	8.8	8.7	
	7.7-	8.1-	9.1-	13.0-	15.5-	13.7-	14.4-	14.5-	
	2.2	3.2	4.5	5.0	5.0	5.0	5.4	5.5	
W(Y)	2.9-	1.0-	1.2	0.5	0.1	0.2-	0.6-	2.1-	
	5.5	7.7	10.3	9.6	13.3	13.3	13.2	10.7	
	13.1-	11.6-	5.0-	7.3-	11.7-	16.0-	8.9-	12.7-	
	5.8	5.5	4.0	3.7	4.3	4.6	3.9	4.5	
WSQ	3 3	2 3	3 3	4 3	3 3	2 3	2 3	3 2	
	52.1	54.4	46.0	58.5	74.5	68.4	59.0	70.5	
	193.0	153.0	106.0	193.0	325.0	289.0	208.0	238.0	
	0.0	4.0	2.0	1.0	0.0	0.0	0.0	0.0	
	58.9	41.9	26.2	38.7	63.0	60.5	52.6	48.4	
	21	18	25	136	216	128	141	110	
T(X)	39.5-	67.2-	30.9-	93.6-	150.1-	118.2-	100.5-	102.6-	
	2.0	19.0	107.0	268.0	125.0	332.0	181.0	220.0	
	183.0-	248.0-	214.0-	513.0-	733.0-	587.0-	591.0-	638.0-	
	49.7	75.9	69.6	127.7	173.9	163.1	161.0	154.4	
T(Y)	94.1-	40.2-	29.0	3.6	14.2-	9.2-	7.5-	46.3-	
	61.0	109.0	285.0	267.0	587.0	587.0	498.0	334.0	
	516.0-	403.0-	69.0-	207.0-	606.0-	780.0-	300.0-	460.0-	
	179.2	130.5	79.5	71.7	130.0	140.9	88.0	114.8	

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.8-	6.9-	7.5-	7.4-	6.9-	5.6-	4.5-	4.4-	
	2.3-	3.5-	4.6-	0.0	1.5	2.0	8.6	4.9	
	12.1-	12.7-	10.3-	12.9-	14.6-	12.8-	10.6-	14.5-	
	3.3	2.6	1.6	2.4	2.8	3.2	3.5	3.7	
W(Y)	4.2-	2.2-	1.5-	0.3	1.6	0.5	0.5-	3.4-	
	2.0-	0.1-	2.9	9.4	9.6	9.8	11.6	5.1	
	7.4-	5.3-	6.4-	5.0-	9.0-	6.8-	12.6-	11.2-	
	1.6	1.4	1.9	2.9	2.9	3.0	3.3	3.0	
WSQ	3 2	2 3	3 3	3 3	3 3	2 3	2 3	3 2	
	77.3	60.6	65.1	69.1	66.0	50.7	43.9	53.8	
	166.0	166.0	106.0	179.0	238.0	166.0	179.0	238.0	
	10.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	
	52.2	40.8	22.5	34.0	38.8	34.8	33.8	44.8	
	11	9	39	147	227	113	131	96	
T(X)	165.1-	117.6-	130.8-	143.9-	132.9-	90.2-	65.0-	81.1-	
	8.0-	19.0-	25.0-	0.0	3.0	11.0	217.0	76.0	
	437.0-	458.0-	285.0-	466.0-	642.0-	466.0-	314.0-	638.0-	
	148.4	127.0	76.7	106.3	118.4	102.1	81.7	119.8	
T(Y)	90.8-	31.1-	24.1-	4.8	22.7	5.2	11.7-	58.6-	
	7.0-	1.0-	60.0	325.0	286.0	251.0	400.0	36.0	
	230.0-	93.0-	110.0-	150.0-	356.0-	85.0-	477.0-	406.0-	
	70.5	31.5	32.1	64.2	65.9	46.9	74.4	78.9	

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	6.0-	5.5-	6.1-	7.2-	7.5-	7.2-	6.4-	5.8-	
	2.9	2.7-	2.9	0.0	2.3	0.5-	1.8-	0.0	
	10.6-	7.8-	10.1-	15.4-	15.2-	15.4-	11.7-	9.6-	
	2.9	1.7	3.1	3.1	2.7	2.7	2.2	1.9	
W(Y)	5.6-	5.0-	2.3-	0.8-	0.7-	1.0-	1.8-	0.8-	
	0.0	0.1-	3.4	5.2	7.0	4.5	3.8	7.1	
	9.1-	10.2-	9.0-	7.5-	8.7-	9.1-	6.7-	7.6-	
	2.4	2.8	2.9	2.5	2.4	2.3	2.2	2.7	
WSQ	3 2	3 3	3 3	4 3	3 3	2 3	2 3	3 2	
	81.2	66.7	60.5	68.5	69.3	65.1	53.9	45.2	
	153.0	117.0	106.0	271.0	238.0	238.0	140.0	106.0	
	17.0	26.0	7.0	0.0	2.0	2.0	4.0	7.0	
	33.6	31.7	29.0	46.8	40.2	42.9	31.6	23.5	
	22	10	32	133	238	129	98	65	
T(X)	132.8-	95.5-	104.0-	151.8-	150.4-	138.8-	102.6-	72.4-	
	50.0	27.0-	50.0	0.0	8.0	1.0-	4.0-	0.0	
	325.0-	217.0-	280.0-	728.0-	670.0-	681.0-	385.0-	247.0-	
	101.2	66.8	86.6	139.8	126.0	129.7	87.0	58.1	
T(Y)	124.2-	102.6-	41.6-	23.0-	18.5-	19.5-	31.2-	11.5-	
	0.0	1.0-	95.0	106.0	165.0	169.0	64.0	123.0	
	301.0-	301.0-	248.0-	272.0-	205.0-	301.0-	185.0-	185.0-	
	81.3	93.0	69.6	57.4	49.8	51.9	48.3	46.7	

JULY 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.5-	2.5-	3.1-	4.9-	5.4-	4.8-	4.6-	4.5-	
	10.3	8.2	6.2	3.3	1.6-	4.9	7.2	1.5	
	11.5-	11.1-	12.4-	12.2-	10.8-	9.3-	11.3-	10.2-	
	4.0	4.6	5.0	3.7	2.4	2.8	3.8	3.5	
W(Y)	4.7-	4.2-	2.1-	2.1-	1.6-	0.8-	2.0	1.7	
	4.2	2.5	2.0	4.1	3.3	5.1	10.7	11.3	
	13.9-	9.7-	7.4-	8.7-	6.4-	6.7-	7.1-	5.3-	
	3.3	2.8	2.1	2.8	2.2	2.9	4.2	3.9	
WSQ	4 2	2 3	3 3	2 3	3 3	3 3	3 3	4 2	
	51.5	53.1	43.6	50.2	42.1	39.9	57.2	50.5	
	325.0	166.0	153.0	153.0	117.0	86.0	128.0	128.0	
	0.0	0.0	1.0	7.0	4.0	2.0	0.0	0.0	
	45.2	34.2	36.3	37.2	30.2	24.4	37.8	37.7	
	245	127	45	38	38	28	32	29	
T(X)	37.5-	50.4-	66.8-	86.0-	72.5-	58.6-	82.8-	81.3-	
	301.0	185.0	69.0	21.0	4.0-	30.0	100.0	5.0	
	594.0-	402.0-	427.0-	422.0-	319.0-	217.0-	354.0-	281.0-	
	91.2	56.8	107.3	109.6	87.0	56.4	100.4	93.5	
T(Y)	87.6-	73.8-	28.9-	23.2-	18.4-	14.9-	36.9	19.8	
	73.0	26.0	11.0	143.0	20.0	48.0	315.0	354.0	
	720.0-	268.0-	230.0-	205.0-	112.0-	141.0-	167.0-	145.0-	
	113.6	73.8	43.6	57.6	31.0	40.0	100.3	87.5	

AUGUST 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3-	1.0-	0.3-	1.5-	1.8-	2.1-	1.7-	1.7-	
	6.0	10.2	8.9	10.3	6.3	7.7	11.0	7.3	
	8.2-	9.2-	9.3-	9.3-	8.1-	10.3-	11.6-	15.7-	
	3.2	4.0	4.4	5.1	4.0	4.5	5.2	5.3	
W(Y)	3.0-	1.6-	0.3	1.0	3.3	4.4	2.5	1.0-	
	6.0	6.8	6.0	11.6	14.4	17.5	21.7	6.3	
	12.1-	12.1-	5.8-	3.9-	1.7-	5.5-	6.0-	13.4-	
	3.3	3.4	2.7	3.3	3.9	5.3	6.3	4.2	
WSQ	4 2	2 3	3 2	3 3	3 3	3 3	3 3	3 2	
	29.8	31.4	27.3	40.3	45.5	72.1	75.7	50.0	
	166.0	166.0	106.0	140.0	238.0	306.0	537.0	424.0	
	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	
	25.8	31.0	28.6	38.2	48.7	66.5	95.9	75.6	
	194	113	45	27	37	41	44	46	
T(X)	9.3-	12.2-	11.3-	21.9-	26.4-	38.7-	44.0-	59.6-	
	141.0	301.0	245.0	285.0	109.0	156.0	449.0	109.0	
	243.0-	235.0-	217.0-	217.0-	346.0-	285.0-	544.0-	931.0-	
	45.6	69.0	81.9	101.4	72.8	93.4	154.0	181.7	
T(Y)	33.7-	22.9-	8.5	26.6	63.9	113.9	103.0	38.9-	
	83.0	141.0	145.0	384.0	591.0	880.0	1455.0	93.0	
	439.0-	439.0-	47.0-	24.0-	19.0-	162.0-	162.0-	795.0-	
	57.5	71.3	34.9	83.0	137.5	214.0	282.7	154.9	

SEPTEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.2	1.1	2.0	1.6	1.9	0.9	1.6	1.5	
	13.1	13.9	13.9	10.8	9.6	10.6	10.3	10.1	
	11.0-	11.5-	7.7-	8.2-	9.1-	10.8-	7.7-	14.5-	
	4.2	4.9	4.1	4.7	4.9	4.6	3.7	4.2	
W(Y)	1.6-	2.2-	2.9-	1.9-	1.6-	0.3-	0.1	1.4	
	12.0	12.6	11.9	9.7	9.9	9.7	10.8	10.8	
	15.0-	20.2-	12.9-	12.1-	13.7-	12.9-	11.6-	8.6-	
	4.5	5.1	4.9	4.5	4.4	4.1	4.8	4.5	
WSQ	3 2	3 3	4 3	3 3	4 3	3 3	3 3	3 3	
	41.5	56.9	53.3	48.1	49.3	39.1	39.8	42.1	
	255.0	424.0	238.0	166.0	193.0	193.0	179.0	238.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	40.3	56.6	54.3	36.2	41.5	36.3	33.1	39.3	
	249	131	82	88	71	107	82	71	
T(X)	16.7	26.8	50.8	33.1	33.3	16.9	22.0	15.1	
	516.0	548.0	548.0	319.0	298.0	417.0	285.0	280.0	
	449.0-	373.0-	138.0-	217.0-	214.0-	319.0-	249.0-	638.0-	
	91.9	127.4	118.1	93.2	100.0	86.8	65.9	102.0	
T(Y)	25.8-	56.9-	64.2-	38.2-	21.3-	6.9-	4.6	24.8	
	472.0	477.0	526.0	268.0	360.0	356.0	334.0	319.0	
	687.0-	1204.0-	466.0-	437.0-	539.0-	466.0-	441.0-	239.0-	
	104.1	158.1	141.5	97.9	119.5	92.2	98.3	93.0	

OCTOBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.0	0.8	0.2	0.4	0.5	0.4	0.8-	0.8-	
	14.6	16.0	14.2	13.0	14.7	13.9	12.1	11.7	
	8.8-	13.0-	9.6-	9.3-	8.7-	10.2-	14.2-	23.1-	
	4.5	5.5	5.5	5.7	6.0	5.9	6.1	6.7	
W(Y)	2.0-	2.5-	1.9-	1.3-	1.2-	0.7-	0.5	0.1-	
	14.6	16.5	13.6	15.5	17.9	18.8	12.1	17.7	
	12.5-	14.9-	15.4-	12.7-	14.4-	16.0-	10.8-	13.1-	
	4.9	5.0	4.5	4.6	4.8	4.9	5.3	6.4	
WSQ	4 2	3 3	4 3	3 3	3 3	3 3	3 3	3 3	
	49.7	62.4	54.5	56.4	60.5	58.5	66.2	86.1	
	271.0	306.0	238.0	271.0	537.0	467.0	238.0	611.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	47.2	58.5	52.3	47.3	73.7	71.9	52.7	98.0	
	257	180	104	107	87	92	101	73	
T(X)	24.6	30.8	21.5	27.2	40.7	32.2	30.3-	64.1-	
	643.0	780.0	581.0	513.0	988.0	665.0	439.0	385.0	
	272.0-	513.0-	267.0-	217.0-	236.0-	281.0-	587.0-	1658.0-	
	116.0	167.4	134.1	130.5	177.4	172.1	169.3	267.2	
T(Y)	27.4-	40.2-	31.6-	17.0-	11.9-	13.0-	11.5	2.5	
	642.0	829.0	557.0	733.0	1199.0	1176.0	437.0	918.0	
	591.0-	635.0-	681.0-	458.0-	591.0-	780.0-	442.0-	620.0-	
	125.8	143.3	140.9	131.5	183.9	182.8	140.5	241.7	

NOVEMBER 1963

	LONGITUDE WEST							
	130	135	140	145	150	155	160	165	170
W(X)	0.4-	1.0-	1.5-	2.6-	0.1-	0.1-	0.2	0.5-	
	10.8	13.7	10.8	12.9	11.5	8.7	12.1	11.7	
	8.2-	13.0-	15.7-	33.5-	7.9-	9.8-	10.1-	12.9-	
	4.7	4.2	4.4	5.3	4.7	4.8	5.8	7.4	
W(Y)	1.4-	0.6	0.4-	1.0-	2.0	0.3-	1.7-	0.1	
	8.7	13.9	16.7	15.4	14.6	13.1	13.1	14.6	
	19.0-	9.3-	15.4-	18.0-	8.6-	10.1-	11.7-	13.7-	
	4.6	4.6	5.2	5.4	5.3	5.8	5.5	6.0	
WSQ	4 3	4 3	3 3	2 3	3 3	4 3	4 3	4 2	
	45.6	40.0	48.7	65.5	54.8	57.1	67.5	90.7	
	363.0	193.0	424.0	1154.0	325.0	193.0	238.0	325.0	
	0.0	0.0	0.0	0.0	0.0	2.0	0.0	10.0	
	46.1	37.5	49.8	119.2	66.5	42.9	51.0	65.9	
	87	142	173	111	50	47	59	38	
T(X)	2.4	11.8-	25.8-	67.9-	21.8	9.3-	25.4	26.6	
	319.0	539.0	319.0	466.0	594.0	273.0	442.0	606.0	
	171.0-	513.0-	931.0-	3313.0-	220.0-	251.0-	280.0-	466.0-	
	86.8	88.3	102.5	328.4	136.7	104.6	157.5	225.3	
T(Y)	31.2-	11.8	19.2-	27.8-	65.5	8.1	42.3-	3.7	
	207.0	548.0	814.0	681.0	720.0	516.0	516.0	642.0	
	1045.0-	217.0-	795.0-	985.0-	269.0-	280.0-	518.0-	710.0-	
	133.3	94.9	141.5	184.5	176.8	145.6	148.9	206.0	

DECEMBER 1963

	LONGITUDE WEST							
	130	135	140	145	150	155	160	165	170
W(X)	1.7-	0.8-	0.3-	0.9	5.0	5.9	4.9	6.3	
	8.2	11.1	19.4	21.1	19.3	24.3	14.5	24.7	
	9.8-	11.6-	12.1-	9.0-	5.1-	9.8-	8.2-	2.7-	
	3.5	4.2	5.5	5.6	5.1	6.0	4.1	5.1	
W(Y)	1.5	2.6	3.0	4.4	2.8	1.0-	0.2-	0.7	
	14.4	16.5	18.0	16.5	15.2	11.3	16.5	14.6	
	6.7-	8.2-	12.1-	12.5-	12.1-	19.3-	13.7-	11.7-	
	5.0	4.4	4.5	5.2	5.4	6.5	6.1	6.4	
WSQ	4 3	4 3	3 3	3 3	4 3	4 3	4 3	4 2	
	42.5	44.2	59.2	78.3	87.7	114.6	77.9	106.7	
	238.0	306.0	424.0	585.0	424.0	662.0	271.0	611.0	
	1.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	
	39.4	47.8	60.1	71.9	84.7	106.7	56.5	100.5	
	86	161	214	168	90	90	92	76	
T(X)	15.9-	4.4-	13.4	52.8	144.5	199.1	117.5	206.5	
	243.0	365.0	1154.0	1476.0	1147.0	1811.0	638.0	1769.0	
	305.0-	441.0-	439.0-	248.0-	124.0-	354.0-	143.0-	64.0-	
	67.1	99.9	166.2	195.5	232.7	295.3	136.4	273.3	
T(Y)	36.9	46.8	55.3	87.1	66.6	54.3-	2.7	38.2	
	591.0	829.0	933.0	829.0	670.0	456.0	777.0	720.0	
	180.0-	296.0-	437.0-	835.0-	537.0-	1147.0-	628.0-	518.0-	
	119.9	126.8	139.8	188.2	185.6	254.1	185.5	225.0	

JANUARY 1964

	LONGITUDE WEST							
	130	135	140	145	150	155	160	165	170
W(X)	3.0-	3.4-	4.1-	4.3-	2.8-	0.0	0.7	1.8	
	13.4	13.9	11.3	10.2	12.8	8.9	15.2	13.7	
	12.9-	16.0-	14.5-	14.6-	12.9-	12.7-	11.3-	14.2-	
	5.2	5.2	4.4	5.1	5.8	5.3	5.8	6.3	
W(Y)	2.7-	1.2-	0.4	1.0	1.2	0.4	1.6	1.9	
	10.7	14.1	11.1	15.4	11.9	9.1	11.6	13.1	
	12.1-	13.0-	12.5-	8.7-	11.9-	10.6-	9.8-	11.8-	
	3.4	4.1	4.8	4.8	4.9	4.4	4.2	5.0	
WSQ	4 3	4 3	3 3	3 3	4 3	4 3	4 3	4 3	
	55.2	57.3	59.2	69.3	67.3	47.4	53.9	72.7	
	238.0	289.0	238.0	271.0	238.0	166.0	238.0	325.0	
	1.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	
	44.3	45.1	47.5	54.8	50.9	36.1	43.3	57.4	
	117	153	180	140	90	66	83	65	
T(X)	45.1-	61.4-	84.3-	104.5-	59.2-	7.8-	18.8	52.9	
	593.0	548.0	354.0	301.0	461.0	245.0	672.0	710.0	
	466.0-	780.0-	638.0-	642.0-	472.0-	458.0-	354.0-	583.0-	
	143.6	139.9	134.1	163.7	168.5	110.7	141.7	184.4	
T(Y)	44.6-	24.6-	7.4	22.1	11.8	0.5	20.5	45.3	
	334.0	599.0	402.0	728.0	526.0	248.0	403.0	606.0	
	437.0-	513.0-	441.0-	273.0-	526.0-	332.0-	354.0-	390.0-	
	87.3	100.3	114.8	129.7	130.0	91.9	94.4	149.0	

FEBRUARY 1964

	LONGITUDE WEST							
	130	135	140	145	150	155	160	165	170
W(X)	4.9-	5.3-	6.3-	6.0-	4.2-	2.3-	2.2-	0.4	
	6.4	6.7	6.7	3.6	8.2	12.1	7.0	12.1	
	19.6-	13.7-	13.7-	12.9-	16.9-	10.7-	10.2-	9.7-	
	4.4	3.9	3.4	3.4	4.4	5.0	4.2	5.7	
W(Y)	5.2-	2.8-	1.5-	0.1-	2.3	2.1	2.9	3.1	
	3.9	7.0	12.7	10.3	12.7	13.1	13.9	14.6	
	23.8-	15.2-	10.2-	10.2-	10.7-	6.3-	8.7-	6.3-	
	4.7	3.6	4.0	4.6	5.0	4.2	4.3	4.1	
WSQ	4 3	4 3	3 3	3 3	4 3	4 3	4 3	4 3	
	93.0	64.2	68.7	68.4	67.5	51.7	49.6	59.2	
	954.0	238.0	199.0	166.0	325.0	193.0	193.0	238.0	
	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	
	132.4	50.7	43.1	38.2	50.5	44.9	37.3	48.6	
	91	150	176	166	93	84	94	75	
T(X)	141.9-	113.8-	129.6-	119.2-	89.1-	30.0-	34.5-	27.1	
	110.0	93.0	93.0	106.0	243.0	437.0	181.0	417.0	
	1764.0-	587.0-	541.0-	466.0-	874.0-	315.0-	301.0-	268.0-	
	257.7	129.9	128.7	119.9	148.2	115.3	81.8	133.7	
T(Y)	154.6-	59.3-	33.0-	7.4-	41.3	51.3	53.2	73.9	
	24.0	165.0	458.0	301.0	458.0	516.0	548.0	642.0	
	2140.0-	672.0-	308.0-	301.0-	327.0-	59.0-	203.0-	70.0-	
	311.2	110.5	93.3	98.8	127.8	114.0	108.7	122.9	

MARCH 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.7-	3.4-	4.9-	5.9-	5.3-	4.4-	4.1-	4.8-	
	10.2	10.7	10.6	10.6	9.7	7.0	7.8	12.7	
	16.0-	16.5-	16.0-	17.0-	17.8-	12.9-	14.5-	15.2-	
	5.4	5.8	5.7	5.5	5.9	4.3	4.2	5.3	
W(Y)	3.5-	2.9-	1.0-	0.8-	0.2	0.3	1.3-	1.0-	
	11.1	12.9	15.4	9.8	10.3	15.4	8.1	9.0	
	14.4-	13.5-	14.5-	16.6-	12.4-	14.8-	11.9-	13.1-	
	4.5	4.7	4.3	4.2	5.0	6.2	5.5	5.2	
WSQ	4 3	4 3	3 3	3 3	3 3	4 3	4 3	3 3	
	64.9	74.8	75.3	83.5	88.5	76.9	66.2	79.7	
	255.0	271.0	255.0	325.0	325.0	289.0	238.0	238.0	
	0.0	1.0	0.0	2.0	7.0	7.0	0.0	0.0	
	45.4	51.5	50.2	59.4	62.8	56.1	45.0	58.4	
	144	183	218	176	85	81	75	66	
T(X)	41.5-	79.7-	109.7-	143.7-	140.2-	89.1-	78.9-	117.0-	
	308.0	356.0	367.0	332.0	303.0	207.0	217.0	460.0	
	728.0-	777.0-	728.0-	380.0-	921.0-	466.0-	638.0-	670.0-	
	135.2	171.5	172.5	193.3	219.3	140.5	126.9	182.3	
T(Y)	79.0-	57.9-	18.0-	24.9-	10.0	30.6-	50.5-	58.5-	
	402.0	466.0	681.0	354.0	312.0	681.0	185.0	248.0	
	591.0-	553.0-	638.0-	792.0-	427.0-	721.0-	526.0-	516.0-	
	123.1	134.8	121.4	132.8	137.0	189.6	130.0	142.1	

APRIL 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.2-	6.0-	6.9-	6.8-	7.1-	3.9-	6.5-	6.2-	
	5.2	3.7	7.6	0.0	4.0	3.2	0.0	5.0	
	11.1-	12.7-	12.4-	13.0-	15.2-	8.3-	15.2-	12.7-	
	3.4	2.8	2.8	2.7	4.6	2.4	3.4	3.4	
W(Y)	5.0-	3.3-	2.0-	0.6-	0.7-	0.7	0.2-	3.3-	
	2.3	4.7	4.8	9.2	8.6	11.8	8.6	3.4	
	13.5-	12.1-	9.0-	6.8-	11.6-	8.1-	9.5-	8.5-	
	2.8	2.6	2.4	3.1	4.4	5.4	4.5	2.7	
WSQ	4 3	4 3	3 3	2 3	3 3	3 3	3 3	2 3	
	61.9	62.0	64.4	62.2	91.2	51.1	74.6	69.0	
	306.0	193.0	193.0	193.0	238.0	140.0	238.0	166.0	
	7.0	10.0	4.0	0.0	0.0	1.0	7.0	7.0	
	48.5	34.7	36.6	36.8	66.4	36.4	55.9	42.5	
	108	146	196	128	44	34	39	36	
T(X)	81.0-	110.9-	132.0-	124.2-	200.5-	60.1-	151.1-	127.1-	
	145.0	26.0	105.0	0.0	22.0	15.0	0.0	127.0	
	567.0-	460.0-	427.0-	513.0-	672.0-	246.0-	672.0-	458.0-	
	103.7	101.0	109.9	111.1	202.9	66.9	160.4	132.9	
T(Y)	93.9-	55.9-	37.9-	7.7-	6.3	20.4	8.7	60.0-	
	8.0	77.0	60.0	235.0	291.0	390.0	269.0	95.0	
	679.0-	477.0-	356.0-	192.0-	403.0-	207.0-	330.0-	237.0-	
	119.8	65.4	84.5	64.8	117.8	121.1	114.5	75.3	

MAY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.2-	3.5-	4.1-	4.8-	6.9-	6.5-	6.5-	6.0-	
	12.7	13.6	12.1	8.8	5.1	0.1	1.6-	0.5-	
	11.6-	11.6-	13.2-	12.7-	12.1-	10.1-	12.9-	10.3-	
	4.3	4.6	5.0	4.9	3.1	2.6	2.9	2.6	
W(Y)	3.3-	2.6-	2.3-	2.3-	1.7-	0.6-	0.8	2.0	
	10.2	15.2	7.8	5.9	7.8	6.3	10.1	12.4	
	10.7-	8.1-	8.7-	9.0-	7.2-	7.2-	8.4-	6.8-	
	4.7	4.3	3.6	2.9	2.9	2.8	4.3	5.1	
WSQ	4 3	4 3	3 3	2 3	3 3	3 3	3 3	3 3	
	57.0	57.7	60.4	61.2	68.7	57.8	69.7	72.8	
	166.0	233.0	179.0	193.0	166.0	106.0	166.0	208.0	
	2.0	0.0	0.0	2.0	1.0	13.0	4.0	10.0	
	41.4	42.2	40.9	42.9	37.9	24.4	41.3	44.2	
	103	147	198	132	48	32	48	28	
T(X)	46.6-	73.2-	92.3-	108.4-	142.2-	108.6-	133.6-	121.8-	
	460.0	557.0	437.0	203.0	32.0	1.0	4.0-	2.0-	
	400.0-	402.0-	498.0-	477.0-	437.0-	280.0-	466.0-	300.0-	
	117.6	121.9	134.4	134.6	115.4	76.9	122.6	91.9	
T(Y)	71.0-	42.7-	42.0-	40.0-	29.3-	8.2-	24.0	54.2	
	301.0	672.0	163.0	169.0	217.0	109.0	280.0	509.0	
	315.0-	237.0-	272.0-	356.0-	185.0-	88.0-	303.0-	140.0-	
	102.9	100.6	71.5	67.9	69.1	44.2	94.8	148.3	

JUNE 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.8-	3.3-	4.1-	5.3-	2.4-	0.5	1.9-	0.5-	
	4.9	7.2	7.8	5.6	7.8	9.6	7.1	6.8	
	11.5-	9.8-	14.2-	13.0-	12.1-	9.3-	9.6-	9.3-	
	3.8	3.8	4.5	4.0	5.2	5.8	4.6	4.4	
W(Y)	3.0-	2.4-	1.3-	0.7-	0.8	0.0	1.2	1.8	
	12.7	13.7	9.7	7.6	8.4	10.1	10.6	12.1	
	10.7-	8.5-	9.1-	8.1-	7.2-	7.2-	7.7-	7.0-	
	4.2	3.8	3.6	3.2	4.1	4.3	4.2	5.1	
WSQ	4 3	4 4	3 3	2 3	3 2	3 3	3 3	3 3	
	44.0	45.2	51.7	55.1	49.8	52.5	44.3	49.7	
	179.0	193.0	208.0	193.0	166.0	117.0	128.0	193.0	
	0.0	0.0	0.0	1.0	4.0	0.0	7.0	2.0	
	42.9	32.0	37.1	34.8	41.8	34.4	29.8	47.8	
	90	133	178	150	48	28	40	23	
T(X)	40.6-	49.5-	74.9-	98.3-	59.8-	10.6	36.5-	3.0-	
	95.0	115.0	217.0	115.0	217.0	248.0	79.0	270.0	
	436.0-	305.0-	583.0-	513.0-	437.0-	217.0-	267.0-	217.0-	
	93.8	75.0	111.1	107.8	133.2	121.8	72.2	89.1	
T(Y)	38.5-	30.6-	22.3-	21.9-	3.2-	12.7	25.7	51.5	
	460.0	540.0	272.0	140.0	185.0	280.0	332.0	477.0	
	360.0-	220.0-	214.0-	230.0-	170.0-	165.0-	134.0-	165.0-	
	110.5	80.8	74.0	53.6	74.8	88.8	86.7	143.0	

JULY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.8-	4.7-	5.5-	6.4-	6.8-	5.8-	6.4-	6.1-	
	3.1	4.0	2.7	0.0	0.3-	4.7	3.9	0.1-	
	9.6-	11.1-	12.1-	12.4-	12.1-	10.3-	10.1-	11.1-	
	2.7	2.5	2.6	2.3	3.4	2.7	2.3	2.1	
W(Y)	4.7-	3.2-	2.4-	2.4-	3.3-	1.5-	1.5-	0.5-	
	0.0	2.2	12.7	6.3	0.0	4.0	3.3	3.3	
	12.1-	10.7-	9.1-	10.2-	8.4-	6.7-	6.3-	9.9-	
	2.7	2.2	2.8	2.5	2.5	2.8	2.7	2.5	
WSQ	4 3	4 3	3 3	2 3	2 3	3 3	3 3	2 3	
	51.2	42.9	50.3	58.5	74.9	50.9	55.0	48.1	
	153.0	140.0	166.0	208.0	166.0	106.0	106.0	140.0	
	0.0	0.0	0.0	0.0	4.0	7.0	17.0	0.0	
	34.4	29.4	33.2	33.7	48.8	26.4	20.4	31.2	
	93	136	177	130	22	28	41	34	
T(X)	57.4-	61.8-	85.4-	109.8-	157.4-	85.6-	93.5-	83.1-	
	78.0	32.0	13.0	0.0	1.0-	38.0	24.0	0.0	
	267.0-	365.0-	437.0-	509.0-	437.0-	285.0-	280.0-	365.0-	
	62.4	70.5	84.8	91.7	136.3	73.6	63.9	79.4	
T(Y)	78.4-	42.2-	35.0-	45.8-	70.6-	25.0-	22.1-	12.6-	
	0.0	17.0	458.0	109.0	0.0	48.0	36.0	60.0	
	420.0-	334.0-	303.0-	301.0-	303.0-	185.0-	93.0-	308.0-	
	89.8	53.4	63.3	58.1	79.9	50.4	39.5	61.1	

AUGUST 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.8-	2.6-	3.9-	5.3-	6.1-	6.2-	5.5-	6.7-	
	4.4	4.8	2.3	0.0	1.3-	1.2-	3.4	0.3	
	10.6-	10.6-	11.3-	11.8-	10.8-	9.6-	9.8-	10.4-	
	3.1	2.7	2.6	2.1	2.4	2.5	3.3	2.8	
W(Y)	2.7-	2.1-	2.0-	1.6-	1.8-	1.4-	0.1	0.2	
	4.1	3.6	4.1	3.6	3.9	9.8	9.8	8.2	
	10.2-	7.9-	7.9-	6.7-	6.7-	5.5-	5.5-	3.6-	
	3.0	2.1	2.1	1.9	2.4	3.3	3.7	2.3	
WSQ	4 3	4 4	3 3	2 3	3 3	3 3	3 3	2 3	
	28.8	23.4	30.7	38.6	51.9	58.1	54.7	58.1	
	128.0	128.0	128.0	140.0	117.0	166.0	166.0	111.0	
	1.0	0.0	0.0	2.0	4.0	2.0	2.0	1.0	
	27.8	23.2	26.4	24.6	32.4	38.5	40.3	32.0	
	70	123	152	136	48	25	29	29	
T(X)	25.6-	26.5-	44.0-	60.1-	96.0-	110.2-	94.6-	117.8-	
	27.0	30.0	11.0	0.0	4.0-	2.0-	95.0	0.0	
	332.0-	332.0-	354.0-	390.0-	319.0-	303.0-	303.0-	298.0-	
	59.3	51.4	62.1	59.8	86.4	85.8	99.7	93.8	
T(Y)	31.7-	19.1-	21.4-	18.5-	31.6-	15.0-	5.4	3.5	
	19.0	15.0	19.0	25.0	40.0	354.0	354.0	170.0	
	301.0-	220.0-	220.0-	185.0-	185.0-	162.0-	162.0-	100.0-	
	53.8	32.0	33.2	32.5	52.2	94.8	96.9	45.1	

SEPTEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.7-	5.1-	6.3-	7.1-	5.8-	4.8-	4.9-	5.0-	
	0.0	4.0	3.3	0.0	0.0	0.0	0.9	0.3-	
	13.7-	12.1-	11.8-	11.8-	10.3-	8.2-	9.5-	8.2-	
	2.8	2.7	2.5	2.4	2.7	2.4	2.5	2.3	
W(Y)	4.5-	2.9-	2.4-	1.4-	0.0-	1.5	0.5-	2.2-	
	3.5	5.1	3.1	3.5	7.0	7.7	7.9	3.0	
	14.6-	9.9-	8.0-	6.2-	5.3-	4.0-	9.9-	9.7-	
	3.3	2.4	2.2	1.9	2.7	3.1	4.1	2.7	
WSQ	4 3	4 3	3 3	2 3	3 3	3 4	3 3	2 3	
	61.1	47.5	56.3	61.4	48.2	40.2	47.3	41.9	
	325.0	223.0	166.0	140.0	106.0	77.0	166.0	106.0	
	0.0	0.0	0.0	2.0	0.0	0.0	2.0	1.0	
	59.4	40.3	32.2	30.1	29.2	21.6	42.3	25.3	
	113	159	191	138	53	28	30	29	
T(X)	91.7-	79.1-	106.0-	126.9-	86.9-	52.5-	74.1-	59.2-	
	0.0	32.0	21.0	0.0	0.0	0.0	7.0	0.0	
	710.0-	483.0-	418.0-	390.0-	285.0-	143.0-	330.0-	143.0-	
	117.1	99.4	92.1	93.5	79.4	40.1	88.6	44.8	
T(Y)	96.8-	46.4-	37.2-	19.0-	0.6	22.4	19.7-	29.8-	
	18.0	32.0	72.0	72.0	165.0	156.0	272.0	24.0	
	642.0-	412.0-	278.0-	145.0-	145.0-	32.0-	360.0-	268.0-	
	141.8	73.4	48.8	33.9	45.7	45.0	108.0	55.5	

OCTOBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3-	1.1-	2.1-	2.7-	1.6-	3.1-	5.0-	7.0-	
	12.1	8.7	12.1	9.7	8.7	14.3	7.8	5.7	
	7.8-	9.6-	12.1-	17.0-	15.1-	13.5-	15.9-	16.2-	
	4.2	4.0	4.5	4.6	5.3	5.8	5.3	4.9	
W(Y)	2.0-	0.8-	1.0-	1.4-	3.2-	3.7-	3.0-	1.3-	
	12.1	10.9	15.4	18.0	12.5	9.4	9.8	9.8	
	10.2-	15.2-	12.6-	12.4-	11.0-	16.0-	12.9-	13.1-	
	4.6	4.9	5.0	5.3	5.3	4.3	4.4	5.1	
WSQ	4 3	4 4	3 3	2 3	3 3	4 3	4 3	3 3	
	43.2	41.5	50.8	58.4	69.6	76.1	81.6	101.3	
	193.0	238.0	238.0	325.0	306.0	343.0	289.0	289.0	
	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	
	39.4	38.9	44.7	50.2	63.6	82.0	70.9	73.3	
	103	171	225	179	60	65	71	51	
T(X)	9.3	11.0-	27.1-	44.3-	48.3-	68.2-	146.6-	218.2-	
	477.0	209.0	439.0	330.0	329.0	763.0	135.0	40.0	
	217.0-	267.0-	437.0-	828.0-	758.0-	591.0-	776.0-	767.0-	
	104.2	70.4	96.8	121.9	180.9	226.0	205.8	206.4	
T(Y)	31.8-	13.3-	0.9-	14.1-	70.7-	92.9-	77.7-	41.1-	
	439.0	326.0	681.0	933.0	514.0	384.0	354.0	433.0	
	281.0-	672.0-	477.0-	427.0-	538.0-	852.0-	466.0-	639.0-	
	94.2	118.4	137.5	148.7	151.4	177.9	132.8	166.5	

NOVEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.4-	2.6-	4.1-	3.8-	2.6-	2.5-	0.9-	0.2-	
	8.7	6.2	6.7	9.8	12.4	12.9	16.4	18.0	
	7.8-	12.9-	12.9-	14.2-	12.9-	13.9-	13.9-	12.9-	
	3.7	3.6	3.8	4.8	6.3	6.5	7.7	9.8	
W(Y)	2.9-	2.2-	0.6	1.4	1.6	1.8	1.3	0.5	
	12.1	13.9	12.7	14.5	11.2	15.2	15.7	12.6	
	13.3-	12.3-	10.4-	14.6-	12.1-	11.2-	12.2-	16.9-	
	5.4	5.5	5.8	6.4	5.3	6.2	6.1	6.1	
WSQ	4 3	4 4	3 3	3 3	4 3	3 3	3 3	3 3	
	51.7	54.4	65.4	80.7	76.9	89.8	99.5	132.6	
	208.0	193.0	166.0	238.0	208.0	238.0	363.0	325.0	
	0.0	1.0	0.0	0.0	0.0	3.0	0.0	0.0	
	43.3	40.4	42.3	53.7	46.3	59.8	75.1	75.7	
	101	143	170	140	63	63	82	81	
T(X)	6.6	44.5-	82.2-	95.2-	61.7-	56.1-	1.1	33.6	
	300.0	93.0	138.0	354.0	509.0	466.0	901.0	933.0	
	217.0-	466.0-	466.0-	581.0-	466.0-	548.0-	548.0-	466.0-	
	80.3	81.3	112.3	146.6	173.4	191.1	269.0	366.3	
T(Y)	60.0-	49.8-	13.3	37.6	42.8	58.7	57.8	19.1	
	437.0	548.0	458.0	638.0	354.0	672.0	719.0	477.0	
	509.0-	452.0-	331.0-	642.0-	439.0-	384.0-	422.0-	874.0-	
	137.7	131.6	141.5	188.0	142.4	205.7	206.6	218.4	

DECEMBER 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.5-	0.3-	0.5-	1.1-	0.8-	0.9-	1.9	1.8	
	7.4	9.8	13.0	17.2	19.6	14.5	16.3	20.3	
	9.1-	8.7-	11.2-	11.8-	9.3-	14.4-	20.2-	14.8-	
	3.9	3.8	4.7	5.0	5.4	6.4	7.0	7.8	
W(Y)	1.1	2.4	3.6	2.8	2.8	3.1	2.9	2.2	
	12.5	14.6	15.7	14.7	23.8	16.2	15.5	17.9	
	8.6-	10.3-	7.8-	6.9-	7.1-	8.8-	8.2-	16.2-	
	4.9	5.3	4.7	4.0	5.1	5.4	6.0	6.9	
WSQ	4 3	4 3	3 3	3 3	4 3	4 3	4 3	4 2	
	40.7	48.7	57.4	50.1	62.8	80.7	98.0	115.4	
	208.0	238.0	363.0	513.0	954.0	271.0	424.0	424.0	
	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	
	40.5	51.5	63.0	57.0	110.9	65.2	81.2	108.2	
	85	155	204	170	96	110	120	82	
T(X)	6.6	12.7	20.0	1.9	25.7	18.0-	71.4	93.4	
	291.0	433.0	665.0	1129.0	1764.0	638.0	788.0	1207.0	
	214.0-	217.0-	372.0-	390.0-	217.0-	610.0-	1204.0-	811.0-	
	72.5	91.6	131.3	146.2	225.8	212.6	259.6	327.9	
T(Y)	26.8	52.8	84.6	53.7	79.4	85.2	102.3	86.6	
	514.0	642.0	812.0	964.0	2140.0	767.0	733.0	1002.0	
	269.0-	285.0-	145.0-	185.0-	141.0-	194.0-	272.0-	767.0-	
	118.6	151.2	165.4	124.7	264.8	161.2	203.0	275.8	

JANUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.9-	1.8-	2.6-	0.9-	2.2	1.6	2.3	3.6	
	7.1	12.4	12.4	17.7	17.6	20.6	16.8	18.5	
	9.0-	10.8-	15.7-	14.6-	6.7-	10.3-	10.2-	7.3-	
	3.5	4.1	5.3	5.5	6.2	7.3	7.3	5.9	
W(Y)	0.7	3.6	4.3	4.7	2.0	0.8	0.7-	0.7-	
	8.7	11.7	20.8	20.2	15.4	12.1	12.7	13.2	
	6.0-	15.2-	11.3-	17.8-	20.6-	15.4-	15.5-	18.2-	
	3.9	4.1	5.4	5.9	6.8	5.5	6.6	5.9	
WSQ	4 3	4 4	3 3	2 3	3 3	3 3	3 3	3 3	
	31.9	50.1	82.1	88.0	94.3	87.6	102.5	83.1	
	106.0	238.0	544.0	424.0	537.0	424.0	325.0	343.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	24.4	41.6	95.1	80.6	105.1	86.8	83.8	82.3	
	86	150	198	175	97	82	81	54	
T(X)	20.1-	37.3-	87.3-	16.8-	112.1	95.6	86.5	123.5	
	123.0	427.0	509.0	918.0	1181.0	1224.0	817.0	989.0	
	248.0-	442.0-	1009.0-	642.0-	81.0-	391.0-	356.0-	181.0-	
	51.2	93.6	202.0	190.3	239.0	274.9	257.5	201.0	
T(Y)	15.0	57.1	122.7	107.6	45.6	19.0	24.6-	30.7-	
	205.0	518.0	1391.0	1204.0	1009.0	474.0	539.0	499.0	
	83.0-	670.0-	354.0-	979.0-	1224.0-	681.0-	804.0-	972.0-	
	54.3	111.2	243.1	245.2	290.6	177.7	248.6	220.8	

FEBRUARY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.2-	4.0-	3.9-	3.7-	3.7-	1.1-	2.6-	2.2-	
	7.1	12.1	16.9	16.7	22.8	14.6	11.0	13.9	
	12.7-	12.1-	14.8-	17.7-	14.5-	12.1-	12.1-	8.7-	
	4.3	5.3	6.7	6.7	6.2	5.0	5.5	4.1	
W(Y)	1.1-	2.6	2.2	0.2-	3.1-	4.4-	4.1-	1.6-	
	17.7	17.7	15.5	14.4	13.7	9.7	10.2	10.4	
	11.3-	14.6-	16.9-	21.8-	21.8-	15.7-	15.2-	19.3-	
	5.3	5.2	6.4	7.9	6.8	5.4	5.4	5.5	
WSQ	4 3	4 3	3 3	2 3	3 3	4 3	4 3	4 3	
	65.1	77.8	104.8	120.4	108.5	75.3	83.9	54.6	
	325.0	325.0	325.0	537.0	585.0	325.0	289.0	424.0	
	0.0	0.0	0.0	2.0	0.0	0.0	1.0	1.0	
	46.6	51.5	66.9	84.2	132.8	81.4	66.4	71.5	
	93	166	202	153	71	58	77	55	
T(X)	33.1-	92.9-	120.6-	104.3-	102.7-	26.2-	50.1-	10.2-	
	207.0	526.0	874.0	814.0	1599.0	642.0	538.0	720.0	
	458.0-	439.0-	721.0-	1055.0-	673.0-	554.0-	437.0-	217.0-	
	111.0	150.6	227.3	267.0	306.6	173.9	173.1	134.7	
T(Y)	17.4-	58.9	71.7	20.3-	135.4-	127.9-	130.3-	56.1-	
	918.0	918.0	804.0	591.0	710.0	268.0	301.0	331.0	
	360.0-	642.0-	874.0-	1464.0-	1503.0-	812.0-	672.0-	1147.0-	
	150.0	160.6	213.1	292.1	340.0	218.4	189.0	195.6	

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.3-	2.5-	3.7-	2.3-	1.5-	0.1-	0.6	2.2	
	9.4	10.7	11.7	9.9	8.6	11.2	10.3	16.0	
	13.0-	16.5-	14.2-	16.4-	11.0-	10.6-	9.6-	10.1-	
	4.8	5.2	4.9	5.2	4.8	5.6	4.9	6.6	
W(Y)	0.8-	0.2	1.3	1.4	1.7-	2.5-	1.6	1.4-	
	8.7	12.1	12.1	14.5	12.9	10.2	15.2	13.1	
	12.7-	14.9-	16.9-	15.3-	14.6-	12.9-	10.7-	7.9-	
	4.4	6.0	5.8	6.5	6.3	6.4	6.7	4.8	
WSQ	4 3	4 4	3 3	3 3	3 3	3 3	3 3	3 3	
	48.7	69.4	73.0	76.1	68.4	77.6	71.2	73.0	
	223.0	363.0	325.0	306.0	238.0	193.0	238.0	255.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	43.1	62.3	59.3	53.7	57.1	48.9	58.4	60.9	
	87	150	223	178	75	51	67	50	
T(X)	28.0-	53.4-	90.1-	57.2-	45.2-	1.5-	10.6	73.2	
	278.0	334.0	606.0	308.0	232.0	406.0	335.0	728.0	
	553.0-	807.0-	600.0-	824.0-	449.0-	417.0-	267.0-	299.0-	
	123.9	171.1	160.0	143.6	128.5	155.8	126.8	205.8	
T(Y)	17.6-	7.9-	22.6	23.6	51.9-	71.2-	51.4	12.5-	
	313.0	665.0	495.0	638.0	466.0	301.0	672.0	516.0	
	460.0-	635.0-	874.0-	674.0-	642.0-	466.0-	334.0-	272.0-	
	103.1	174.4	170.5	190.8	186.2	171.4	205.9	136.8	

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.2-	1.8-	2.6-	4.7-	5.4-	4.2-	4.5-	2.3-	
	15.4	13.9	12.4	8.4	8.2	10.1	12.4	10.7	
	9.1-	10.2-	10.1-	13.3-	16.9-	13.2-	13.5-	13.0-	
	5.1	4.6	4.6	4.8	5.5	6.6	6.5	6.3	
W(Y)	3.3-	1.6-	0.7-	0.2-	0.1	0.6	0.8	1.8-	
	12.6	17.0	12.1	9.4	10.6	9.8	11.1	10.8	
	13.6-	13.1-	11.9-	11.9-	8.7-	5.3-	8.0-	14.6-	
	5.5	5.7	4.9	4.5	4.8	3.9	4.0	6.2	
WSQ	4 3	4 3	3 3	2 3	3 3	3 3	3 3	3 3	
	66.8	59.5	52.2	65.3	82.0	76.8	79.4	86.3	
	238.0	289.0	238.0	238.0	325.0	179.0	208.0	238.0	
	0.0	0.0	0.0	0.0	7.0	4.0	7.0	0.0	
	47.6	45.3	36.8	45.1	55.7	48.0	44.1	58.5	
	106	149	187	143	60	43	46	69	
T(X)	18.1	10.4-	37.0-	109.3-	150.0-	114.5-	97.0-	55.4-	
	681.0	553.0	509.0	156.0	171.0	354.0	427.0	442.0	
	213.0-	281.0-	433.0-	587.0-	874.0-	499.0-	553.0-	513.0-	
	129.4	110.8	101.3	135.4	173.4	184.1	195.1	178.9	
T(Y)	65.0-	18.6-	14.0-	15.8-	10.5-	23.8	6.4	72.1-	
	477.0	828.0	439.0	325.0	417.0	354.0	348.0	332.0	
	557.0-	516.0-	526.0-	526.0-	327.0-	112.0-	225.0-	642.0-	
	154.6	152.5	108.6	104.1	131.8	99.6	95.6	197.7	

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.9-	6.0-	6.4-	6.5-	5.8-	3.5-	4.6-	5.0-	
	2.9	2.3	3.3	0.7	4.7	5.8	3.6	1.0	
	13.0-	11.6-	15.2-	14.4-	17.0-	18.0-	17.7-	12.1-	
	2.8	2.9	3.2	3.0	4.6	5.7	5.7	3.1	
W(Y)	4.2-	1.7-	0.2	1.0	1.5	1.2	1.7-	2.1-	
	3.9	6.7	6.8	11.1	12.1	8.2	5.6	4.1	
	8.2-	7.5-	9.0-	11.2-	4.5-	3.9-	9.6-	7.3-	
	2.1	2.4	3.1	3.2	2.9	3.3	4.2	3.0	
WSQ	4 3	4 3	3 3	2 3	3 3	3 3	3 3	3 3	
	45.8	52.1	61.5	62.6	65.6	57.1	74.2	47.2	
	193.0	140.0	238.0	208.0	289.0	325.0	325.0	166.0	
	2.0	1.0	2.0	0.0	7.0	0.0	2.0	2.0	
	30.2	35.5	44.0	41.6	68.5	74.8	85.1	37.2	
	110	158	192	152	43	30	27	34	
T(X)	59.7-	99.9-	126.4-	123.9-	129.4-	103.4-	138.1-	80.0-	
	16.0	12.0	20.0	3.0	156.0	46.0	100.0	2.0	
	513.0-	384.0-	670.0-	591.0-	828.0-	933.0-	918.0-	437.0-	
	76.8	102.7	130.0	119.6	209.1	227.8	261.4	99.2	
T(Y)	55.2-	28.7-	4.6-	17.2	17.6	20.9	36.0-	34.0-	
	18.0	75.0	181.0	402.0	439.0	217.0	174.0	70.0	
	220.0-	198.0-	356.0-	406.0-	163.0-	71.0-	267.0-	198.0-	
	49.5	44.7	64.4	75.8	74.5	56.1	90.3	57.8	

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.9-	4.0-	4.9-	6.6-	6.2-	5.0-	4.5-	3.0-	
	10.8	2.7	7.7	5.9	2.2	7.6	5.3	4.1	
	10.6-	11.1-	11.6-	13.0-	12.7-	14.5-	10.3-	9.0-	
	3.2	3.0	3.8	3.5	3.6	5.1	3.2	3.6	
W(Y)	4.7-	3.2-	1.3-	0.8-	1.0-	0.2-	1.2	2.2	
	4.8	3.3	7.1	5.0	6.3	6.5	7.8	9.3	
	10.3-	10.3-	7.7-	7.3-	7.3-	6.5-	6.3-	5.8-	
	2.7	2.5	2.9	2.6	2.6	3.2	3.5	3.6	
WSQ	4 3	4 3	3 3	2 3	3 2	4 3	4 3	3 3	
	43.8	42.0	49.2	62.8	58.9	61.1	43.9	39.6	
	153.0	140.0	179.0	208.0	166.0	238.0	106.0	106.0	
	0.0	0.0	0.0	0.0	2.0	10.0	0.0	1.0	
	34.4	31.0	37.1	41.9	43.1	51.8	29.9	28.4	
	126	141	171	131	36	33	27	37	
T(X)	31.8-	60.3-	85.6-	131.3-	124.6-	112.8-	61.0-	45.4-	
	372.0	13.0	134.0	81.0	6.0	105.0	93.0	19.0	
	368.0-	365.0-	436.0-	513.0-	458.0-	638.0-	285.0-	248.0-	
	71.2	75.1	106.9	123.0	123.7	158.9	80.4	61.7	
T(Y)	70.0-	44.8-	23.8-	22.7-	19.5-	11.4-	17.3	30.2	
	30.0	20.0	210.0	95.0	109.0	181.0	217.0	217.0	
	301.0-	285.0-	257.0-	300.0-	237.0-	239.0-	109.0-	118.0-	
	79.2	52.5	53.9	58.9	56.6	75.6	62.5	65.1	

JULY 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.5-	5.0-	5.9-	6.8-	6.1-	6.7-	5.7-	6.5-	
	10.3	2.9	6.8	0.0	1.8-	3.9-	3.0-	0.1-	
	9.8-	11.1-	13.3-	11.1-	12.1-	9.3-	8.8-	12.9-	
	3.7	3.0	3.6	2.5	2.5	1.5	1.8	3.6	
W(Y)	4.4-	3.5-	2.9-	2.6-	1.9-	0.2	1.9	1.9	
	0.1	3.1	7.0	3.1	0.0	2.9	9.0	8.9	
	9.7-	10.3-	8.8-	8.3-	5.2-	3.3-	0.6-	5.2-	
	2.4	2.3	2.4	2.1	1.7	1.6	2.6	3.6	
WSQ	4 3	4 4	3 3	2 3	3 3	3 3	3 3	2 3	
	45.0	51.5	62.2	64.0	50.7	50.2	46.3	71.5	
	166.0	179.0	238.0	140.0	153.0	86.0	140.0	166.0	
	1.0	0.0	0.0	2.0	10.0	26.0	10.0	13.0	
	37.1	38.0	42.4	33.0	37.6	19.5	29.7	49.1	
	58	120	174	115	19	16	21	22	
T(X)	38.2-	85.0-	118.2-	130.0-	96.1-	89.7-	73.6-	146.5-	
	285.0	50.0	93.0	0.0	7.0-	24.0-	10.0-	1.0-	
	354.0-	402.0-	587.0-	365.0-	420.0-	217.0-	253.0-	466.0-	
	91.2	90.3	122.1	93.3	104.0	57.4	63.1	156.3	
T(Y)	61.6-	59.5-	52.0-	48.9-	33.2-	4.0	33.0	32.1	
	2.0	16.0	165.0	72.0	0.0	60.0	297.0	245.0	
	303.0-	391.0-	346.0-	230.0-	145.0-	26.0-	2.0-	145.0-	
	79.3	71.9	66.0	54.8	46.0	21.7	68.0	71.5	

AUGUST 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	4.1-	4.4-	5.2-	6.2-	6.9-	5.2-	4.1-	3.1-	
	3.5	2.5	5.9	1.5	2.9-	2.3-	6.7	6.3	
	11.6-	11.8-	11.3-	11.8-	12.1-	10.1-	9.0-	7.2-	
	3.2	3.0	3.2	2.6	2.5	2.0	3.4	3.5	
W(Y)	4.0-	1.5-	1.2-	0.0-	2.0	2.3	1.1	1.5	
	2.1	7.7	5.0	6.5	9.6	9.6	7.8	12.7	
	8.1-	7.3-	6.0-	4.4-	2.2-	1.9-	6.4-	1.5-	
	2.4	2.1	2.0	2.0	3.6	3.1	2.8	3.5	
WSQ	4 3	4 4	3 3	2 3	3 3	3 2	3 3	2 3	
	49.3	34.9	42.9	49.0	70.3	46.6	37.4	36.5	
	153.0	140.0	128.0	140.0	166.0	106.0	106.0	166.0	
	1.0	0.0	0.0	0.0	10.0	7.0	4.0	1.0	
	40.3	28.2	30.1	31.3	39.7	28.0	28.4	44.4	
	87	136	170	113	14	20	33	23	
T(X)	77.8-	56.1-	75.9-	93.4-	133.7-	66.2-	49.0-	16.7-	
	17.0	8.0	81.0	3.0	10.0-	7.0-	138.0	230.0	
	400.0-	390.0-	354.0-	390.0-	439.0-	280.0-	248.0-	125.0-	
	98.7	70.8	82.1	87.8	111.6	60.7	68.3	65.6	
T(Y)	63.7-	15.2-	16.0-	1.8	94.3	38.6	16.4	44.3	
	10.0	107.0	69.0	181.0	267.0	267.0	217.0	460.0	
	278.0-	145.0-	145.0-	100.0-	26.0-	52.0-	110.0-	7.0-	
	71.3	28.1	31.0	37.4	93.9	70.3	53.9	121.6	

SEPTEMBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3-	1.3-	2.4-	3.4-	2.5-	5.1-	4.9-	4.2-	
	5.9	6.7	6.7	5.1	5.1	2.7	5.3	5.1	
	7.7-	10.8-	14.2-	13.5-	8.8-	9.7-	10.7-	9.6-	
	3.2	4.1	4.4	3.6	4.1	3.5	4.1	3.7	
W(Y)	0.8-	1.2-	2.0-	2.0-	1.7-	0.6-	0.4-	0.5	
	9.7	8.1	9.0	4.4	2.0	4.6	5.5	5.9	
	9.1-	13.1-	10.3-	8.4-	6.0-	8.8-	7.4-	3.6-	
	4.0	3.9	3.4	2.6	2.0	2.8	3.5	2.4	
WSQ	4 3	4 4	3 3	2 3	3 2	3 3	3 3	3 3	
	26.8	35.2	40.8	35.6	29.7	46.4	53.3	36.9	
	106.0	289.0	208.0	135.0	86.0	153.0	128.0	106.0	
	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.0	
	25.1	37.3	41.0	36.1	28.9	33.8	31.7	29.1	
	66	133	164	106	29	51	38	30	
T(X)	2.9-	33.2-	49.2-	55.2-	44.5-	81.9-	90.1-	60.9-	
	138.0	100.0	140.0	32.0	31.0	9.0	37.0	32.0	
	134.0-	527.0-	581.0-	520.0-	181.0-	325.0-	334.0-	267.0-	
	39.4	87.4	111.5	91.3	64.5	85.0	94.2	77.5	
T(Y)	7.1-	22.7-	31.3-	28.7-	22.6-	17.3-	3.8-	0.2	
	268.0	141.0	248.0	24.0	7.0	51.0	118.0	81.0	
	213.0-	639.0-	384.0-	303.0-	141.0-	278.0-	230.0-	100.0-	
	63.1	78.8	69.9	52.0	32.8	60.7	56.6	34.9	

OCTOBER 1963 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.3-	3.4-	3.0-	4.0-	4.4-	3.6-	2.9-	2.9-	
	5.8	6.0	10.2	11.1	6.8	6.3	6.3	4.9	
	8.1-	9.8-	13.0-	10.6-	11.3-	13.0-	12.1-	10.1-	
	3.0	3.0	4.1	4.1	4.1	4.5	4.6	3.8	
W(Y)	3.1-	1.7-	1.5-	1.5-	1.9-	0.8-	0.9	1.4	
	7.6	5.6	8.1	7.5	2.4	8.2	11.2	11.3	
	12.9-	9.7-	9.9-	12.9-	8.1-	6.7-	6.7-	5.5-	
	3.7	3.1	3.5	3.4	2.5	2.9	4.1	4.6	
WSQ	4 3	4 4	3 3	2 3	4 3	4 3	4 3	4 3	
	37.4	32.9	41.1	45.8	45.6	42.7	47.5	45.4	
	166.0	113.0	193.0	166.0	128.0	193.0	166.0	139.0	
	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	
	31.6	25.1	34.3	34.6	34.0	49.4	48.0	39.6	
	85	135	188	139	33	41	58	34	
T(X)	29.7-	37.5-	42.7-	53.9-	73.5-	80.2-	64.4-	48.1-	
	46.0	78.0	336.0	397.0	76.0	109.0	130.0	52.0	
	229.0-	251.0-	513.0-	332.0-	354.0-	513.0-	437.0-	299.0-	
	48.3	51.2	93.7	90.0	95.9	136.4	121.4	74.1	
T(Y)	44.8-	23.0-	21.3-	27.9-	29.1-	21.8-	25.7	45.1	
	105.0	68.0	207.0	215.0	27.0	143.0	368.0	372.0	
	466.0-	269.0-	360.0-	466.0-	220.0-	192.0-	163.0-	112.0-	
	34.3	51.6	68.2	73.4	49.7	64.6	105.1	112.7	

NOVEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.7	2.3	1.5	1.1	2.3	2.6	1.2	0.6	
	17.4	17.8	12.2	14.6	13.7	23.2	17.8	17.0	
	13.7-	12.4-	12.1-	15.9-	10.2-	8.2-	12.1-	17.5-	
	4.6	5.2	5.6	6.1	5.7	6.7	5.7	6.7	
W(Y)	0.7-	1.2-	2.2-	0.5	0.5	0.1-	0.4	1.2	
	12.4	9.8	11.6	16.4	16.0	22.8	17.0	15.7	
	13.9-	17.7-	15.7-	12.7-	12.4-	11.1-	11.6-	23.2-	
	5.5	6.1	6.2	6.1	6.0	6.4	6.0	7.8	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 2	
	59.6	70.1	77.2	76.1	74.8	92.1	70.2	107.2	
	343.0	424.0	325.0	424.0	325.0	537.0	325.0	537.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	52.4	68.1	63.0	66.6	65.5	118.0	70.3	93.4	
	275	154	109	128	101	93	109	89	
T(X)	52.5	53.1	39.2	18.7	67.8	108.6	55.2	30.9	
	926.0	921.0	505.0	713.0	710.0	1553.0	921.0	931.0	
	539.0-	526.0-	441.0-	945.0-	301.0-	290.0-	439.0-	932.0-	
	136.0	172.8	164.7	196.1	173.8	328.8	182.7	249.5	
T(Y)	23.5-	48.8-	74.3-	13.8	25.6	17.5	22.6	10.1	
	427.0	433.0	403.0	824.0	780.0	1527.0	880.0	812.0	
	557.0-	931.0-	804.0-	458.0-	518.0-	348.0-	403.0-	1553.0-	
	145.7	184.2	194.2	189.2	190.7	240.8	190.7	307.3	

DECEMBER 1963

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.1-	0.2-	2.5	3.9	4.4	6.3	8.0	6.9	
	16.4	16.8	17.8	16.8	16.4	18.0	26.7	19.3	
	9.7-	9.0-	7.3-	6.0-	11.3-	8.7-	4.5-	2.7-	
	3.7	4.1	5.6	5.4	6.6	6.8	6.5	6.0	
W(Y)	2.0	3.8	4.6	5.3	2.5	1.2	2.0-	1.3-	
	17.8	17.0	17.7	35.5	17.3	15.0	12.7	15.2	
	12.4-	12.1-	7.8-	8.7-	17.5-	12.7-	12.7-	13.5-	
	5.9	4.7	4.6	7.2	6.5	6.3	5.3	6.2	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 2	
	52.4	53.8	79.9	124.5	111.6	127.2	139.0	124.4	
	325.0	294.0	467.0	1299.0	467.0	537.0	802.0	383.0	
	0.0	0.0	0.0	7.0	4.0	1.0	10.0	0.0	
	59.5	55.9	87.4	175.9	92.3	93.0	132.8	101.6	
	260	146	94	76	55	56	64	45	
T(X)	3.2	14.3	98.6	144.9	157.0	225.3	313.3	255.9	
	824.0	817.0	1028.0	1028.0	1028.0	1181.0	2195.0	1088.0	
	356.0-	248.0-	170.0-	239.0-	354.0-	303.0-	36.0-	48.0-	
	101.8	111.8	212.0	241.1	249.2	290.3	402.7	302.8	
T(Y)	54.0	77.7	114.8	219.7	102.6	51.8	68.3-	29.7-	
	921.0	839.0	918.0	3729.0	878.0	1009.0	460.0	672.0	
	509.0-	437.0-	249.0-	203.0-	880.0-	458.0-	777.0-	553.0-	
	177.1	151.5	200.5	503.3	259.1	242.1	183.7	218.9	

JANUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.5	1.7	2.0	0.7	1.7	2.7	3.6	4.5	
	17.9	16.0	16.4	11.6	10.7	13.6	15.7	16.9	
	12.7-	11.4-	9.2-	8.7-	8.9-	11.7-	9.1-	6.8-	
	5.6	5.7	5.6	4.9	4.9	5.6	6.0	6.0	
W(Y)	1.5-	0.5-	0.3	0.9	2.5	2.1	2.6	4.1	
	13.4	13.2	19.6	16.9	12.1	13.4	14.6	17.9	
	12.1-	17.8-	14.6-	12.9-	9.7-	10.1-	13.4-	8.7-	
	4.7	5.6	7.0	6.4	5.7	5.5	5.9	5.2	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
	57.9	67.0	84.6	67.3	65.3	73.6	90.1	99.1	
	424.0	424.0	383.0	325.0	238.0	238.0	424.0	537.0	
	0.0	0.0	0.0	1.0	0.0	0.0	0.0	10.0	
	59.4	74.4	69.6	51.2	46.5	61.8	85.4	97.4	
	256	186	106	94	70	94	114	87	
T(X)	47.0	61.3	70.2	16.6	47.5	76.9	128.3	158.3	
	1066.0	804.0	778.0	384.0	433.0	557.0	931.0	988.0	
	460.0-	374.0-	237.0-	329.0-	245.0-	385.0-	214.0-	257.0-	
	169.5	183.8	176.6	116.0	121.5	166.1	218.5	250.0	
T(Y)	27.3-	27.7-	8.7-	14.1	49.8	63.7	87.5	112.7	
	593.0	501.0	1103.0	874.0	526.0	593.0	795.0	1199.0	
	603.0-	1055.0-	713.0-	493.0-	348.0-	299.0-	743.0-	294.0-	
	140.8	193.7	227.5	185.3	150.9	172.8	217.3	223.3	

FEBRUARY 1964

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.4-	4.7-	4.3-	3.4-	2.8-	1.7-	1.6-	1.8	
	9.6	6.0	2.9	8.2	5.9	9.1	7.6	21.1	
	12.1-	12.1-	12.4-	12.1-	12.9-	10.3-	10.6-	11.1-	
	4.2	3.8	3.8	3.9	3.4	3.5	3.9	6.3	
W(Y)	4.8-	2.6-	0.0	1.9	2.5	2.9	2.9	3.1	
	6.3	12.4	10.6	15.2	13.1	20.6	15.2	12.4	
	15.2-	12.9-	12.9-	9.7-	12.1-	7.8-	12.9-	12.1-	
	3.5	3.6	5.0	5.0	4.6	5.5	6.0	5.9	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 3	
	64.2	57.0	58.4	54.5	46.7	53.6	62.0	87.1	
	238.0	166.0	208.0	238.0	193.0	424.0	238.0	445.0	
	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	
	47.3	37.9	36.6	43.9	40.4	64.3	46.0	76.5	
	236	153	110	89	73	67	80	75	
T(X)	64.1-	91.2-	78.8-	55.3-	39.7-	22.0-	29.4-	74.5	
	371.0	141.0	50.0	243.0	183.0	214.0	127.0	1287.0	
	437.0-	437.0-	539.0-	439.0-	466.0-	285.0-	332.0-	402.0-	
	111.0	95.4	102.5	98.5	80.2	69.8	82.2	248.6	
T(Y)	102.7-	53.7-	8.3-	44.9	32.8	67.6	59.6	67.6	
	199.3	427.0	314.0	671.0	516.0	1224.0	672.0	456.0	
	672.0-	466.0-	466.0-	268.0-	439.0-	217.0-	466.0-	437.0	
	125.9	88.9	103.9	127.6	116.7	201.1	165.1	170.6	

MARCH 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.5	0.8-	0.6-	0.2	0.2	1.4-	2.4-	2.2-	
	13.0	10.7	11.3	15.2	12.1	9.5	11.3	13.9	
	12.0-	10.6-	13.0-	13.9-	11.7-	14.5-	16.9-	12.9-	
	4.4	5.0	5.5	5.6	4.8	4.3	4.7	5.4	
W(Y)	4.3-	2.8-	1.2-	1.0-	1.0-	1.4-	0.8-	1.2	
	14.5	17.8	11.7	11.1	12.7	12.1	10.8	14.4	
	14.5-	16.9-	16.9-	20.2-	18.0-	16.5-	14.2-	10.8-	
	5.6	5.7	5.4	6.7	7.2	7.0	5.9	5.4	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
	69.3	66.1	61.4	77.1	76.1	71.8	63.1	64.5	
	238.0	325.0	325.0	424.0	325.0	271.0	325.0	208.0	
	1.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0	
	51.8	54.3	57.4	88.8	78.7	61.7	53.6	47.6	
	292	192	148	137	116	124	128	111	
T(X)	13.5	4.8-	11.1	34.4	25.5	30.5-	54.1-	36.6-	
	513.0	423.0	354.0	672.0	538.0	330.0	354.0	548.0	
	472.0-	332.0-	513.0-	548.0-	518.0-	638.0-	874.0-	466.0-	
	115.5	117.2	133.5	161.5	146.5	120.3	143.5	144.6	
T(Y)	97.2-	54.4-	39.6-	80.1-	80.8-	62.5-	39.5-	37.6	
	638.0	921.0	385.0	348.0	460.0	420.0	319.0	591.0	
	638.0-	874.0-	874.0-	1204.0-	933.0-	777.0-	583.0-	372.0-	
	169.2	183.6	172.8	270.0	250.9	213.7	151.2	140.8	

APRIL 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.4-	4.1-	3.8-	3.8-	3.6-	3.0-	3.2-	1.8-	
	7.7	5.9	7.6	8.7	9.2	12.7	14.7	13.9	
	10.6-	12.1-	12.1-	14.2-	13.0-	14.7-	15.0-	15.0-	
	3.5	3.6	3.8	4.7	4.9	4.9	5.5	6.4	
W(Y)	5.9-	3.1-	1.4-	0.5-	1.1	0.7	0.4-	2.6-	
	2.6	7.1	9.8	7.9	12.1	11.8	15.5	12.9	
	20.6-	9.7-	8.5-	7.8-	10.7-	14.2-	18.0-	16.0-	
	3.1	3.2	3.9	4.1	4.9	5.0	5.9	6.0	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 2	
	62.3	49.3	47.0	53.4	61.9	58.7	76.1	86.5	
	424.0	166.0	166.0	208.0	193.0	223.0	363.0	424.0	
	1.0	1.0	5.0	0.0	0.0	1.0	0.0	2.0	
	50.0	36.7	33.0	43.7	47.9	49.2	77.2	81.9	
	247	176	110	115	101	122	116	106	
T(X)	48.2-	73.2-	65.0-	81.2-	79.3-	58.7-	81.1-	35.7-	
	253.0	138.0	105.0	205.0	235.0	460.0	807.0	795.0	
	417.0-	437.0-	437.0-	581.0-	513.0-	626.0-	687.0-	687.0-	
	90.3	98.8	92.4	135.7	138.2	137.1	198.7	227.5	
T(Y)	116.0-	52.6-	22.6-	8.6-	24.3	12.3	16.5-	78.2-	
	16.0	167.0	251.0	220.0	439.0	406.0	804.0	466.0	
	1224.0-	278.0-	219.0-	217.0-	423.0-	583.0-	933.0-	931.0-	
	137.3	66.8	68.9	76.3	122.5	130.6	205.5	221.9	

MAY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3	1.3-	0.2-	3.0-	3.3-	3.4-	4.9-	6.2-	
	17.3	15.2	13.7	12.1	10.1	8.7	7.2	6.5	
	10.1-	10.2-	10.1-	10.3-	10.6-	12.9-	12.9-	14.4-	
	4.0	4.3	5.8	5.0	5.0	4.9	4.0	4.7	
W(Y)	3.7-	2.5-	2.1-	3.2-	1.8-	0.2-	1.3	2.2	
	13.6	17.8	11.2	4.9	7.1	13.5	14.5	12.7	
	13.1-	12.7-	8.7-	11.1-	10.1-	10.3-	9.2-	5.0-	
	5.6	5.6	4.1	3.7	4.1	4.7	4.6	3.8	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 2	
	61.1	58.1	54.7	56.9	56.0	58.5	63.0	79.8	
	306.0	325.0	208.0	193.0	117.0	208.0	255.0	208.0	
	1.0	0.0	2.0	2.0	1.0	2.0	2.0	4.0	
	47.5	49.2	47.7	37.3	34.1	42.9	48.8	52.7	
	225	121	66	65	54	62	80	62	
T(X)	14.9	14.7-	31.5	35.8-	62.7-	56.0-	101.5-	155.1-	
	868.0	670.0	553.0	477.0	280.0	243.0	125.0	181.0	
	325.0-	336.0-	299.0-	305.0-	314.0-	466.0-	473.0-	591.0-	
	115.7	114.2	157.7	122.2	114.6	124.4	127.1	172.6	
T(Y)	72.8-	31.1-	18.3-	63.2-	24.0-	4.8	31.1	46.0	
	557.0	921.0	406.0	51.0	203.0	553.0	638.0	458.0	
	516.0-	460.0-	230.0-	348.0-	280.0-	285.0-	235.0-	100.0-	
	142.9	154.4	93.9	88.6	87.9	122.7	121.4	96.5	

JUNE 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.6	0.6	0.8	0.6	0.8	1.2	1.3	2.1	
	9.0	14.7	13.3	12.9	12.7	11.7	12.7	12.9	
	8.5-	10.1-	8.7-	12.1-	8.1-	8.1-	7.8-	7.7-	
	3.6	4.7	5.3	4.9	4.4	4.4	4.6	5.0	
W(Y)	3.7-	1.0-	0.1-	1.5	1.9	2.9	2.7	1.5	
	13.6	17.9	14.2	12.1	10.2	13.6	16.5	9.1	
	13.7-	8.8-	8.9-	11.1-	7.8-	6.7-	7.4-	8.9-	
	5.0	5.6	5.3	4.0	3.6	4.5	5.0	4.1	
WSQ	3 2	3 3	3 3	3 3	3 3	4 3	3 3	3 2	
	52.7	54.7	56.7	43.2	36.7	49.4	55.1	48.8	
	238.0	537.0	238.0	166.0	166.0	238.0	306.0	166.0	
	0.0	0.0	4.0	0.0	0.0	0.0	0.0	1.0	
	42.7	57.8	48.4	36.9	32.1	50.6	59.6	39.1	
	271	167	97	93	80	76	89	68	
T(X)	1.8-	17.6	28.7	19.4	26.8	39.8	51.7	59.6	
	335.0	588.0	587.0	466.0	460.0	518.0	460.0	466.0	
	278.0-	299.0-	243.0-	420.0-	141.0-	141.0-	135.0-	107.0-	
	75.0	129.3	127.5	105.8	86.7	108.1	114.3	117.1	
T(Y)	66.3-	9.8	14.2	19.7	22.1	63.8	72.3	21.0	
	593.0	1199.0	583.0	439.0	301.0	557.0	829.0	248.0	
	553.0-	246.0-	273.0-	348.0-	217.0-	92.0-	181.0-	245.0-	
	137.8	162.5	139.5	83.4	59.9	128.3	161.5	76.6	

JULY 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.5-	1.5-	0.9-	2.0-	2.1-	4.7-	5.3-	4.4-	
	6.8	6.1	6.2	5.3	5.3	5.3	3.0	1.7	
	9.6-	9.6-	6.7-	10.6-	9.8-	15.2-	15.2-	11.3-	
	3.0	3.2	3.2	3.6	4.1	5.0	4.3	2.9	
W(Y)	4.1-	2.5-	3.0-	3.2-	2.2-	2.1-	1.4-	0.7	
	7.3	6.7	5.9	4.8	3.7	4.7	5.1	8.9	
	12.9-	11.6-	12.4-	13.8-	10.3-	8.1-	10.8-	6.0-	
	3.5	3.2	4.4	3.5	3.7	2.9	2.9	3.0	
WSQ	4 2	2 3	4 3	3 3	4 3	4 3	3 3	3 3	
	38.7	29.6	39.6	39.4	40.3	60.3	57.2	36.8	
	179.0	153.0	153.0	117.0	128.0	238.0	238.0	128.0	
	0.0	0.0	0.0	0.0	2.0	7.0	1.0	2.0	
	35.3	25.9	38.6	32.7	33.7	60.4	53.4	27.9	
	248	131	51	50	42	42	47	42	
T(X)	14.4-	18.5-	11.3-	27.5-	37.3-	113.3-	110.8-	53.9-	
	257.0	93.0	100.0	100.0	93.0	38.0	52.0	5.0	
	267.0-	267.0-	181.0-	314.0-	305.0-	670.0-	670.0-	354.0-	
	54.0	48.5	51.7	69.1	75.3	183.6	159.2	65.7	
T(Y)	62.4-	29.3-	57.7-	48.1-	39.5-	37.9-	27.8-	11.3	
	101.0	93.0	81.0	36.0	95.0	53.0	77.0	245.0	
	466.0-	403.0-	427.0-	319.0-	285.0-	239.0-	319.0-	83.0-	
	94.1	55.4	110.7	78.1	80.6	60.2	68.6	46.3	

AUGUST 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.9-	2.4-	3.2-	4.3-	3.8-	3.5-	2.9-	2.8-	
	6.2	5.9	6.3	3.6	5.1	2.3	4.1	5.9	
	10.1-	11.1-	12.7-	13.0-	10.8-	13.0-	12.9-	12.9-	
	3.0	3.7	4.3	3.6	4.0	3.9	4.6	5.2	
W(Y)	3.3-	2.9-	2.9-	1.9-	0.8-	0.2-	0.8	1.6	
	7.1	4.1	4.1	5.8	7.8	10.1	7.2	6.3	
	13.4-	10.6-	7.9-	7.7-	9.2-	5.7-	6.7-	5.2-	
	3.4	2.6	2.8	2.9	4.1	3.3	2.8	2.8	
WSQ	4 2	2 3	3 3	3 3	3 3	3 3	3 4	3 3	
	32.2	34.9	45.0	43.5	46.9	37.7	38.5	45.0	
	238.0	166.0	166.0	193.0	140.0	193.0	166.0	166.0	
	0.0	0.0	4.0	0.0	0.0	0.0	1.0	2.0	
	33.6	32.5	31.8	36.1	38.8	48.4	43.5	46.9	
	243	153	78	68	44	35	36	32	
T(X)	17.3-	39.6-	57.4-	70.9-	72.9-	67.6-	66.2-	71.4-	
	93.0	124.0	83.0	25.0	32.0	8.0	70.0	81.0	
	335.0-	402.0-	458.0-	513.0-	336.0-	513.0-	466.0-	466.0-	
	53.3	79.9	93.5	100.2	96.9	126.0	125.2	145.6	
T(Y)	45.2-	35.1-	34.6-	26.5-	21.4-	10.3-	0.3	4.7	
	79.0	47.0	70.0	46.0	217.0	280.0	125.0	77.0	
	593.0-	332.0-	194.0-	192.0-	237.0-	192.0-	185.0-	145.0-	
	84.4	57.6	46.6	46.6	83.7	73.3	43.9	45.0	

SEPTEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.7-	4.4-	4.3-	4.0-	2.8-	2.5-	1.4-	2.1-	
	6.0	3.3	3.3	2.4	3.9	5.0	9.0	8.0	
	12.9-	12.7-	12.1-	10.3-	10.7-	8.2-	12.1-	11.3-	
	3.2	3.4	3.4	2.8	3.0	2.6	3.9	4.3	
W(Y)	5.8-	3.6-	1.9-	0.7-	2.0	1.2	0.1	0.5-	
	3.9	1.2	5.1	7.8	9.3	10.3	9.2	7.0	
	18.0-	9.7-	11.2-	8.1-	7.6-	7.7-	13.7-	12.7-	
	3.3	2.3	2.7	3.2	3.3	3.8	4.7	4.5	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 3	
	61.5	49.7	41.2	34.4	31.6	29.1	39.0	43.5	
	325.0	166.0	166.0	106.0	117.0	106.0	193.0	193.0	
	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	
	54.4	36.5	36.1	27.9	26.8	24.9	42.8	49.5	
	235	150	102	85	67	67	76	65	
T(X)	57.3-	78.0-	65.7-	48.8-	30.5-	21.3-	13.0-	43.0-	
	141.0	21.0	21.0	27.0	31.0	69.0	297.0	187.0	
	630.0-	458.0-	437.0-	285.0-	315.0-	143.0-	437.0-	385.0-	
	89.5	94.2	88.6	63.2	55.4	33.1	87.2	108.3	
T(Y)	116.7-	54.8-	27.2-	9.3-	26.4	17.9	16.4-	30.8-	
	24.0	3.0	140.0	217.0	235.0	285.0	253.0	160.0	
	933.0-	303.0-	349.0-	185.0-	105.0-	110.0-	539.0-	477.0-	
	148.0	60.1	62.4	52.2	58.8	66.4	117.9	122.2	

OCTOBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.8	0.9	2.3	2.6	2.7	2.2	0.8	0.9-	
	13.0	12.1	15.4	15.9	15.7	12.2	12.9	13.4	
	9.6-	11.6-	14.1-	9.0-	9.3-	9.8-	12.5-	11.7-	
	4.3	5.0	5.9	5.4	5.5	5.1	5.2	5.6	
W(Y)	1.3-	0.2	1.5-	2.4-	2.3-	3.3-	2.3-	2.0-	
	17.2	17.0	18.0	12.1	12.1	10.1	10.2	9.2	
	13.4-	15.9-	15.8-	18.0-	18.4-	16.5-	17.7-	14.5-	
	5.0	6.0	6.6	5.9	6.3	5.6	6.2	5.6	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 2	
	45.7	62.7	85.7	76.9	83.3	73.7	71.9	67.7	
	306.0	289.0	343.0	424.0	585.0	289.0	325.0	238.0	
	0.0	0.0	0.0	0.0	1.0	2.0	0.0	1.0	
	44.4	60.5	80.4	79.9	86.9	68.9	77.2	58.2	
	277	187	119	120	107	107	117	100	
T(X)	23.7	31.7	66.5	83.3	91.1	60.0	19.2	22.4-	
	514.0	449.0	681.0	945.0	1101.0	442.0	477.0	593.0	
	335.0-	384.0-	752.0-	297.0-	275.0-	305.0-	474.0-	518.0-	
	101.2	128.4	202.1	200.8	200.6	144.1	147.7	162.1	
T(Y)	20.7-	17.8	24.7-	67.5-	73.3-	99.4-	95.5-	74.7-	
	865.0	828.0	933.0	477.0	439.0	239.0	360.0	235.0	
	593.0-	776.0-	720.0-	933.0-	1290.0-	777.0-	918.0-	638.0-	
	121.5	190.5	245.0	203.1	239.0	202.7	231.6	156.5	

NOVEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.4	0.9	0.0	0.1-	0.6-	1.8-	0.9-	0.3	
	13.6	11.9	11.2	15.5	14.2	12.7	22.8	23.2	
	8.8-	10.3-	10.3-	11.2-	14.2-	17.8-	16.8-	13.4-	
	4.9	4.9	4.9	5.0	5.5	5.7	7.6	8.1	
W(Y)	2.3-	1.4-	0.7-	0.4-	0.4-	0.7	3.1	2.9	
	11.1	14.0	21.8	18.0	19.6	14.6	16.9	22.2	
	25.7-	17.0-	15.9-	13.5-	12.4-	15.2-	17.7-	17.7-	
	6.2	6.7	8.0	7.2	6.2	6.3	6.4	7.2	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
	70.6	71.8	89.3	76.2	69.4	76.4	108.4	126.7	
	662.0	325.0	537.0	325.0	383.0	325.0	537.0	662.0	
	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	
	59.8	58.7	70.3	56.0	61.8	63.9	95.2	119.4	
	301	208	166	158	143	144	143	121	
T(X)	35.3	23.3	0.3	1.0-	4.7-	32.2-	8.9	66.9	
	717.0	526.0	519.0	733.0	581.0	518.0	1532.0	1599.0	
	296.0-	354.0-	376.0-	368.0-	583.0-	921.0-	817.0-	975.0-	
	135.8	132.2	134.7	136.4	160.1	181.7	294.0	355.2	
T(Y)	77.4-	50.4-	22.5-	4.3	2.4	18.4	106.8	86.5	
	374.0	595.0	1464.0	933.0	1103.0	642.0	931.0	1656.0	
	1921.0-	880.0-	776.0-	553.0-	518.0-	672.0-	918.0-	918.0-	
	217.1	201.9	279.4	211.4	190.1	195.7	253.4	322.3	

DECEMBER 1964 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	2.3	2.6	4.2	2.8	2.6	0.8	2.6	1.3	
	17.0	11.8	20.6	20.6	19.6	16.5	18.0	18.0	
	10.8-	11.9-	5.8-	15.4-	13.4-	13.9-	25.6-	24.5-	
	4.5	4.3	4.9	6.2	6.7	7.6	7.7	9.0	
W(Y)	1.6	3.2	4.0	3.0	2.1	2.6	1.1	0.8	
	16.5	14.3	18.5	15.2	15.7	21.6	18.9	15.9	
	17.4-	16.9-	12.1-	11.2-	11.8-	12.0-	12.4-	19.3-	
	5.5	5.9	5.7	5.5	6.2	6.6	7.5	7.4	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
	57.8	69.8	90.6	84.5	94.9	108.3	123.8	137.6	
	343.0	343.0	424.0	537.0	383.0	467.0	744.0	915.0	
	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.0	
	60.3	66.0	92.3	86.5	81.6	72.7	119.0	172.8	
	275	189	142	111	100	92	113	78	
T(X)	45.2	63.7	134.1	80.2	84.8	25.2	70.6	13.4	
	680.0	629.0	1224.0	1224.0	1103.0	777.0	933.0	1055.0	
	442.0-	395.0-	177.0-	681.0-	593.0-	593.0-	2024.0-	2157.0-	
	127.9	139.9	223.9	247.7	256.9	249.6	361.4	518.7	
T(Y)	46.9	80.6	121.8	91.0	74.6	85.8	43.5	21.5-	
	829.0	763.0	989.0	1009.0	812.0	1351.0	1096.0	740.0	
	926.0-	874.0-	437.0-	368.0-	390.0-	472.0-	757.0-	1558.0-	
	172.3	194.0	216.2	191.7	203.2	245.2	314.0	362.6	

JANUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.3	0.6-	1.1	2.1	2.1	1.7	2.7	4.0	
	16.7	13.7	15.9	15.4	19.8	15.9	15.4	19.8	
	12.1-	13.5-	12.9-	6.9-	15.7-	18.6-	12.0-	12.0-	
	5.2	4.8	4.4	4.5	6.3	6.0	6.6	6.1	
W(Y)	0.3	2.8	4.4	3.0	0.4	0.3-	0.6-	0.9	
	15.4	16.0	20.8	17.7	12.9	23.2	13.7	13.9	
	15.4-	15.4-	15.9-	15.4-	21.7-	24.6-	13.4-	12.9-	
	5.1	7.0	7.2	6.6	8.1	8.8	5.6	5.5	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 2	
	53.4	80.2	92.0	77.8	110.6	115.7	82.0	84.5	
	306.0	306.0	445.0	424.0	537.0	606.0	238.0	403.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	55.2	62.3	86.7	84.5	135.3	136.7	76.8	70.5	
	274	177	103	79	73	80	75	64	
T(X)	30.8	16.5-	23.3	61.6	63.0	42.4	73.3	114.0	
	824.0	529.0	545.0	641.0	1205.0	776.0	681.0	1147.0	
	423.0-	679.0-	466.0-	429.0-	931.0-	1154.0-	472.0-	472.0-	
	141.6	139.5	158.9	155.3	281.7	243.4	240.6	226.5	
T(Y)	7.4	62.8	121.6	77.8	53.1-	53.8-	14.4-	31.6	
	681.0	726.0	1249.0	918.0	464.0	1589.0	540.0	548.0	
	713.0-	681.0-	779.0-	1154.0-	1459.0-	1756.0-	593.0-	466.0-	
	141.1	225.7	288.3	252.0	468.0	443.6	182.8	159.9	

FEBRUARY 1965 — LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	3.0-	3.9-	4.0-	4.5-	1.8-	2.8-	0.4-	0.1	
	12.8	12.1	13.9	8.7	8.7	13.4	16.2	8.7	
	9.6-	11.7-	13.6-	17.0-	11.7-	15.2-	10.1-	9.6-	
	3.8	5.1	5.0	5.8	4.0	5.5	5.7	5.3	
W(Y)	0.4	2.6	0.3-	1.8-	5.0-	4.4-	2.1-	0.5-	
	15.8	17.7	14.2	15.5	10.1	10.7	9.7	14.6	
	17.0-	14.5-	17.2-	21.8-	28.3-	29.5-	15.2-	12.7-	
	6.3	6.1	7.7	9.9	8.2	6.2	6.1	7.8	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 2	
	68.0	85.1	106.7	156.2	111.5	95.3	74.9	90.0	
	325.0	424.0	325.0	537.0	802.0	891.0	289.0	238.0	
	0.0	1.0	10.0	9.0	1.0	0.0	0.0	7.0	
	59.8	64.7	73.5	103.2	129.5	128.4	64.7	47.7	
	298	149	89	79	53	55	58	33	
T(X)	44.3-	88.0-	73.4-	156.2-	45.5-	65.2-	26.9	22.3	
	526.0	442.0	706.0	868.0	329.0	593.0	787.0	273.0	
	474.0-	621.0-	597.0-	868.0-	518.0-	670.0-	282.0-	247.0-	
	196.3	167.2	173.0	255.4	148.2	198.5	198.5	135.6	
T(Y)	2.1	63.2	39.3-	83.1-	208.5-	152.9-	63.4-	0.8-	
	804.0	1055.0	591.0	804.0	299.0	423.0	268.0	642.0	
	468.0-	623.0-	880.0-	1464.0-	2026.0-	2891.0-	670.0-	458.0-	
	180.1	210.1	283.8	419.2	411.0	372.3	164.9	234.5	

MARCH 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.9	2.4-	2.6-	2.5-	0.6-	1.9			
	19.4	11.7	12.6	9.9	9.7	15.2			
	9.1-	12.7-	11.2-	12.9-	11.7-	9.4-			
	5.2	4.7	4.9	5.0	5.0	6.3			
W(Y)	3.6-	0.7-	0.4	1.8	0.5-	1.8-			
	10.2	12.1	15.2	12.9	14.5	17.9			
	15.7-	19.6-	12.5-	13.0-	13.9-	14.2-			
	4.7	6.2	5.0	6.2	7.5	8.2			
WSQ	3 2	2 3	3 3	3 3	3 3	3 2			
	63.1	66.3	56.5	72.8	81.6	114.4			
	537.0	383.0	238.0	193.0	325.0	322.0			
	0.0	0.0	0.0	0.0	1.0	7.0			
	82.2	64.3	51.5	51.6	66.6	70.6			
	288	178	94	74	63	50	0	0	
T(X)	61.6	34.6-	38.1-	65.4-	15.5-	47.1			
	1199.0	606.0	477.0	360.0	356.0	672.0			
	248.0-	477.0-	349.0-	477.0-	606.0-	325.0-			
	205.2	134.0	133.5	145.0	141.5	204.3			
T(Y)	86.2-	28.2-	1.9	47.4	11.4-	45.0-			
	281.0	439.0	670.0	466.0	710.0	923.0			
	988.0-	1103.0-	514.0-	513.0-	593.0-	598.0-			
	169.3	204.1	144.9	167.6	249.0	305.2			

APRIL 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.8	0.4-	0.4-	1.7-	3.3-	2.9-	2.5-	2.1-	
	14.7	13.3	10.3	10.3	10.3	9.6	12.9	7.0	
	7.8-	10.1-	9.8-	15.5-	10.7-	16.0-	16.8-	18.3-	
	4.4	4.8	4.3	4.7	4.8	5.4	5.3	4.8	
W(Y)	3.0-	2.7-	2.4-	1.5-	0.8-	0.6	1.3	1.2	
	16.5	14.2	11.2	11.3	12.4	13.0	10.6	13.9	
	18.0-	17.8-	17.8-	13.1-	9.1-	13.6-	12.9-	13.1-	
	6.3	6.0	6.0	5.5	4.3	5.6	5.0	6.6	
WSQ	3 2	2 3	3 3	3 3	3 3	3 2	3 3	4 3	
	71.7	65.9	60.7	57.6	52.7	68.9	60.4	72.9	
	363.0	325.0	325.0	325.0	166.0	325.0	289.0	343.0	
	0.0	0.0	1.0	1.0	0.0	2.0	0.0	0.0	
	67.3	60.3	57.5	49.0	36.2	61.4	47.8	66.0	
	240	169	111	101	80	76	98	66	
T(X)	55.8	5.2	5.8	23.5-	56.5-	79.5-	49.9-	56.1-	
	827.0	587.0	327.0	354.0	285.0	247.0	466.0	207.0	
	217.0-	299.0-	354.0-	804.0-	354.0-	804.0-	817.0-	975.0-	
	138.5	127.8	102.4	127.8	109.7	169.6	149.6	166.5	
T(Y)	79.8-	67.6-	49.5-	17.0-	6.5-	14.1	20.6	23.7	
	777.0	583.0	406.0	354.0	427.0	513.0	314.0	548.0	
	933.0-	921.0-	921.0-	516.0-	303.0-	557.0-	466.0-	639.0-	
	237.5	189.4	189.0	143.5	91.4	159.2	118.7	197.2	

MAY 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	1.1-	2.4-	2.6-	2.2-	1.8-	0.4	0.6-	0.5-	
	6.1	8.7	7.2	9.4	10.3	10.6	9.0	11.7	
	7.8-	10.1-	10.8-	15.4-	10.2-	9.1-	8.8-	12.5-	
	2.9	3.7	3.9	4.2	4.2	5.3	4.4	4.6	
W(Y)	4.5-	0.6-	1.6	2.9	3.4	1.1	1.8-	1.9-	
	4.8	12.1	11.1	20.8	12.7	10.7	12.1	10.1	
	14.4-	8.7-	10.1-	5.8-	5.0-	10.6-	12.1-	15.4-	
	3.4	3.5	4.5	5.0	3.8	4.9	5.7	5.5	
WSQ	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 2	
	42.1	32.4	45.3	55.6	46.9	53.3	55.5	55.5	
	238.0	166.0	128.0	445.0	179.0	166.0	193.0	271.0	
	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	
	34.1	26.3	33.4	57.1	38.6	33.5	39.2	54.8	
	242	174	124	125	112	112	128	82	
T(X)	17.9-	25.9-	37.3-	37.2-	25.1-	10.1	9.6-	3.3-	
	124.0	217.0	178.0	278.0	285.0	332.0	248.0	518.0	
	217.0-	280.0-	319.0-	681.0-	360.0-	245.0-	348.0-	591.0-	
	41.8	61.1	80.8	104.0	85.3	101.5	89.7	123.6	
T(Y)	69.4-	6.8-	36.1	76.1	62.5	16.8	29.7-	40.1-	
	38.0	439.0	348.0	1269.0	477.0	315.0	439.0	442.0	
	591.0-	205.0-	299.0-	157.0-	69.0-	354.0-	439.0-	681.0-	
	93.6	57.5	91.2	162.3	102.4	108.5	136.9	159.5	

JUNE 1965

LONGITUDE WEST

	130	135	140	145	150	155	160	165	170
W(X)	0.1	1.4-	1.1-	0.9-	0.7	0.2	1.6	2.5	
	10.7	10.1	12.1	7.8	9.6	12.1	12.7	9.8	
	9.8-	10.6-	10.6-	10.1-	9.7-	9.3-	7.6-	6.5-	
	3.3	4.0	5.0	4.5	3.8	3.9	4.2	3.9	
W(Y)	5.2-	3.4-	0.8-	0.3-	0.2	1.3	1.7	1.3	
	5.3	6.8	8.7	10.6	9.0	8.2	10.3	9.2	
	13.2-	9.7-	7.6-	9.1-	9.3-	10.3-	7.8-	8.2-	
	3.3	3.3	3.8	3.5	3.7	3.8	4.1	4.3	
WSQ	3 2	2 3	3 3	3 3	3 3	3 3	3 3	3 3	
	48.3	41.1	40.7	33.7	28.5	31.8	40.3	41.5	
	193.0	166.0	166.0	117.0	106.0	166.0	179.0	166.0	
	1.0	2.0	0.0	1.0	0.0	1.0	0.0	0.0	
	40.4	32.7	34.0	29.0	27.5	32.0	37.8	34.6	
	222	140	109	90	75	73	79	62	
T(X)	6.7-	22.2-	15.4-	11.3-	11.8	11.1	36.3	39.5	
	334.0	280.0	437.0	203.0	267.0	437.0	458.0	354.0	
	354.0-	354.0-	314.0-	280.0-	268.0-	217.0-	105.0-	181.0-	
	54.8	84.2	102.9	69.7	61.4	79.5	101.1	85.1	
T(Y)	84.5-	44.6-	7.9-	4.4	5.3	16.3	22.3	23.9	
	93.0	185.0	273.0	314.0	248.0	237.0	391.0	303.0	
	516.0-	330.0-	230.0-	213.0-	217.0-	285.0-	217.0-	220.0-	
	113.6	72.8	67.7	67.7	58.5	63.2	74.7	80.6	

APPENDIX TABLE B

Interpolated values of winds and wind properties, lat. 0° to 35° N., long. 130° to 170° W., at the center of 5° square units of area for each month, July 1963 to June 1965, presented in geographic format with decimal point at the center of 5° square

List of notations

W(X) East-west component of wind velocity, m. sec.$^{-1}$; wind from the east is negative.

W(Y) North-south component of wind velocity, m. sec.$^{-1}$; wind from the north is negative.

WSQ Square of the wind speed, m.^{2} sec.$^{-2}$.

T(X) East-west component of wind stress, 10^{-2} dynes cm.$^{-2}$; positive eastward.

T(Y) North-south component of wind stress, 10^{-2} dynes cm.$^{-2}$; positive northward.

JULY 1963

		LONGITUDE WEST							
w(x)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-4.7	-4.7	-5.0	-5.3	-4.2	-3.0	-2.6	-1.7
	27	-6.1	-6.0	-6.3	-6.3	-6.3	-5.5	-3.9	-3.4
	22	-7.3	-7.1	-7.5	-7.5	-7.1	-6.2	-5.3	-5.7
	17	-6.7	-7.5	-6.8	-7.3	-7.3	-6.5	-6.2	-5.3
	12	-6.7	-8.3	-7.3	-6.4	-6.0	-5.8	-6.5	-5.1
	7	-7.2	-7.3	-5.2	-3.6	-2.8	-2.8	-3.0	-4.0
	2	-7.5	-6.2	-2.6	-1.7	-2.8	-3.5	-4.1	-4.1
w(y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.4	1.0	-1.0	-1.5	-1.9	-2.3	-4.2	-4.4
	27	2.1	1.7	-0.2	-1.8	-2.4	-3.0	-3.7	-4.8
	22	0.1	-1.1	-1.3	-1.5	-2.2	-2.7	-3.3	-5.0
	17	0.3	0.0	-1.3	-1.8	-2.1	-3.0	-3.4	-3.8
	12	-3.5	-6.2	-3.8	-1.6	-3.3	-3.4	-1.5	-3.3
	7	-4.8	-5.6	-1.4	0.3	-1.7	-1.3	1.0	1.1
	2	-2.5	-1.7	1.0	2.2	2.5	1.9	1.6	1.9
wsq		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	57.	52.	42.	45.	48.	47.	53.	50.
	27	68.	48.	53.	57.	63.	59.	46.	51.
	22	62.	63.	64.	67.	65.	50.	51.	65.
	17	57.	58.	63.	70.	68.	62.	63.	57.
	12	67.	80.	79.	65.	62.	57.	55.	52.
	7	80.	99.	65.	46.	33.	27.	23.	20.
	2	87.	55.	20.	16.	17.	26.	32.	34.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-95.	-77.	-60.	-74.	-82.	-65.	-40.	-38.
	27	-130.	-75.	-96.	-105.	-128.	-105.	-70.	-60.
	22	-122.	-122.	-132.	-143.	-125.	-80.	-85.	-105.
	17	-110.	-125.	-113.	-140.	-128.	-110.	-115.	-80.
	12	-112.	-285.	-160.	-112.	-95.	-80.	-105.	-80.
	7	-140.	-205.	-120.	-45.	-45.	-24.	-19.	-75.
	2	-137.	-110.	-24.	-10.	-10.	-22.	-30.	-22.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	25.	25.	-5.	-13.	-23.	-45.	-76.	-80.
	27	32.	25.	-7.	-33.	-49.	-53.	-53.	-75.
	22	-3.	-30.	-33.	-25.	-43.	-62.	-60.	-80.
	17	10.	-20.	-30.	-37.	-42.	-54.	-62.	-67.
	12	-90.	-125.	-72.	-35.	-53.	-55.	-32.	-53.
	7	-103.	-130.	-34.	10.	-32.	-15.	23.	5.
	2	-62.	-37.	1.	10.	13.	16.	10.	16.

AUGUST 1963

		LONGITUDE WEST							
w(x)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.7	-1.8	-2.3	-1.9	-1.9	-0.9	-0.9	-1.5
	27	-3.1	-4.3	-5.4	-6.3	-5.7	-5.0	-4.4	-3.9
	22	-4.0	-6.2	-7.2	-7.3	-7.3	-6.6	-5.9	-3.9
	17	-5.7	-6.4	-6.9	-5.6	-7.0	-7.0	-5.8	-5.4
	12	-5.9	-5.9	-7.0	-6.0	-6.2	-5.0	-4.8	-6.2
	7	-5.4	-5.8	-6.1	-4.7	-4.0	-1.9	-1.5	-1.0
	2	-4.3	-4.9	-3.4	-1.5	-3.3	-4.9	-5.0	-3.9
w(y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.0	2.6	4.2	2.7	0.7	0.1	-1.7	-3.4
	27	1.2	1.4	2.2	1.6	-0.3	-1.2	-2.3	-4.2
	22	0.7	-0.2	-0.2	-0.3	-1.2	-2.5	-4.0	-3.8
	17	0.3	-0.4	-1.3	-2.0	-2.8	-3.0	-3.6	-3.7
	12	-0.2	-0.6	-2.1	-3.7	-4.1	-4.5	-3.2	-1.8
	7	-0.5	-0.7	-0.7	0.5	3.1	1.6	2.8	1.8
	2	0.8	0.7	1.8	3.4	4.1	4.2	4.2	4.3
wsq		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	50.	73.	67.	48.	38.	29.	31.	37.
	27	38.	39.	48.	68.	47.	42.	48.	43.
	22	38.	51.	63.	65.	61.	60.	68.	40.
	17	45.	49.	55.	51.	70.	69.	57.	54.
	12	35.	40.	63.	63.	67.	58.	44.	48.
	7	45.	52.	44.	44.	47.	14.	37.	38.
	2	23.	28.	25.	21.	18.	49.	63.	62.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-60.	-38.	-43.	-30.	-22.	-15.	-15.	-29.
	27	-22.	-53.	-73.	-126.	-87.	-75.	-73.	-76.
	22	-49.	-88.	-130.	-135.	-118.	-118.	-123.	-94.
	17	-73.	-98.	-119.	-85.	-135.	-138.	-100.	-90.
	12	-60.	-70.	-120.	-112.	-118.	-93.	-68.	-85.
	7	-85.	-105.	-74.	-69.	-72.	-24.	-10.	-12.
	2	-25.	-38.	-32.	-15.	-20.	-65.	-110.	-120.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-28.	110.	100.	60.	22.	3.	-25.	-43.
	27	30.	20.	43.	38.	0.	-21.	-33.	-62.
	22	14.	-8.	-3.	-4.	-25.	-46.	-75.	-46.
	17	10.	-10.	-33.	-38.	-59.	-53.	-69.	-70.
	12	-6.	-12.	-31.	-70.	-75.	-72.	-46.	-29.
	7	4.	-3.	-12.	32.	53.	10.	50.	49.
	2	5.	10.	15.	43.	60.	60.	60.	60.

SEPTEMBER 1963

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.0	1.0	0.4	1.0	1.0	1.0	0.8	1.0
	27	-4.3	-4.8	-5.0	-3.0	-3.0	-2.4	-1.8	-1.0
	22	-5.3	-6.2	-6.3	-5.4	-4.1	-3.2	-5.3	-5.4
	17	-6.1	-6.3	-6.2	-5.7	-5.1	-3.8	-3.2	-3.7
	12	-6.2	-5.5	-5.0	-4.0	-3.5	-2.7	-3.0	-3.0
	7	-2.9	-2.9	-2.8	-3.2	-3.2	-3.3	-2.3	-1.7
	2	-2.5	-2.5	-2.2	-1.6	-1.8	-2.1	-1.7	-1.6
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.0	-0.1	-0.7	-1.4	-2.0	-2.4	-1.8	-1.5
	27	0.1	-0.4	-0.7	-1.5	-2.2	-1.7	-1.7	-1.2
	22	-2.0	-1.2	-1.1	-1.3	-1.3	-2.0	-4.1	-3.2
	17	-1.1	-1.3	-2.3	-2.2	-1.5	-1.8	-1.6	-3.1
	12	-1.1	-1.2	-1.4	-1.7	-3.3	-2.6	-0.9	-2.5
	7	0.7	0.7	-0.1	-0.3	-0.2	1.2	3.4	2.1
	2	1.8	1.8	1.6	2.3	3.0	4.5	4.5	4.5
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	44.	38.	38.	43.	47.	52.	52.	40.
	27	42.	52.	44.	33.	36.	45.	39.	33.
	22	47.	54.	60.	48.	39.	43.	80.	57.
	17	53.	53.	54.	47.	40.	33.	43.	46.
	12	53.	49.	36.	26.	25.	20.	30.	39.
	7	27.	21.	20.	14.	17.	29.	45.	35.
	2	24.	20.	17.	24.	25.	30.	55.	55.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	8.	8.	7.	20.	25.	31.	21.	17.
	27	-69.	-83.	-79.	-50.	-47.	-50.	-42.	-18.
	22	-85.	-112.	-115.	-90.	-60.	-55.	-115.	-83.
	17	-95.	-107.	-101.	-75.	-55.	-42.	-49.	-65.
	12	-112.	-92.	-54.	-37.	-24.	-24.	-54.	-53.
	7	-38.	-23.	-21.	-18.	-15.	-30.	-39.	-35.
	2	-30.	-22.	-16.	-12.	-15.	-22.	-30.	-30.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	21.	4.	-11.	-24.	-45.	-59.	-48.	-25.
	27	-3.	-6.	-16.	-23.	-32.	-46.	-30.	-23.
	22	-30.	-30.	-18.	-15.	-17.	-43.	-155.	-67.
	17	-18.	-21.	-35.	-35.	-16.	-30.	-40.	-51.
	12	-23.	-15.	-23.	-18.	-24.	-10.	-10.	-31.
	7	5.	5.	-3.	-5.	0.	25.	65.	24.
	2	13.	13.	13.	18.	31.	42.	82.	60.

OCTOBER 1963

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.0	-0.8	0.0	0.1	-0.1	0.1	0.1	0.0
	27	-3.7	-3.7	-4.3	-4.6	-3.6	-3.1	-3.1	-2.4
	22	-6.3	-5.8	-6.2	-6.2	-5.4	-4.4	-3.8	-3.9
	17	-6.7	-6.8	-7.0	-7.5	-6.3	-5.7	-6.3	-6.3
	12	-5.0	-4.8	-6.4	-6.3	-3.8	-3.7	-4.1	-3.6
	7	-1.0	-3.4	-4.3	-4.4	-3.9	-3.8	-3.5	-3.0
	2	-4.3	-3.7	-3.9	-6.7	-7.3	-8.1	-8.0	-6.8
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.3	0.3	-0.7	-1.2	-1.5	-1.8	-2.5	-2.2
	27	0.9	0.4	-0.8	-1.3	-1.3	-1.6	-1.7	-3.0
	22	-0.2	-0.8	-0.9	-1.3	-2.1	-3.2	-2.8	-2.7
	17	-0.6	-1.0	-2.2	-1.7	-1.8	-3.0	-4.2	-4.5
	12	-0.5	-1.4	-2.9	-4.1	-3.4	-3.2	-2.6	-2.3
	7	0.7	-0.8	-1.2	-0.2	0.7	1.7	2.8	3.4
	2	1.5	1.2	1.0	2.2	3.4	5.3	7.3	7.4
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	77.	63.	57.	58.	54.	50.	57.	47.
	27	49.	46.	46.	46.	46.	37.	30.	34.
	22	63.	54.	57.	53.	47.	42.	29.	39.
	17	55.	64.	70.	66.	49.	53.	63.	64.
	12	52.	53.	63.	64.	53.	53.	52.	52.
	7	38.	37.	36.	54.	68.	76.	70.	52.
	2	33.	28.	29.	58.	83.	121.	137.	113.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-57.	-23.	25.	29.	17.	12.	23.	11.
	27	-69.	-72.	-85.	-74.	-48.	-32.	-30.	-30.
	22	-125.	-95.	-112.	-102.	-75.	-54.	-47.	-52.
	17	-103.	-130.	-140.	-145.	-100.	-95.	-128.	-124.
	12	-82.	-75.	-125.	-112.	-70.	-73.	-81.	-85.
	7	-23.	-33.	-45.	-91.	-125.	-138.	-127.	-108.
	2	-27.	-35.	-50.	-118.	-175.	-255.	-300.	-270.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	20.	10.	-13.	-12.	-17.	-30.	-40.	-40.
	27	30.	9.	-21.	-28.	-28.	-21.	-25.	-40.
	22	-2.	-15.	-20.	-16.	-27.	-35.	-29.	-24.
	17	-12.	-23.	-39.	-37.	-45.	-53.	-96.	-110.
	12	-10.	-26.	-50.	-75.	-38.	-46.	-52.	-55.
	7	5.	-8.	-16.	-10.	46.	90.	80.	65.
	2	14.	14.	12.	58.	110.	185.	227.	199.

NOVEMBER 1963

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.6	1.4	2.2	1.7	0.8	1.3	1.8	2.1
	27	-0.9	-0.8	-1.2	-0.6	-2.0	-1.8	-1.9	-1.4
	22	-3.3	-3.8	-5.1	-5.0	-5.3	-5.1	-5.3	-5.3
	17	-5.7	-6.3	-6.8	-5.7	-5.8	-6.2	-5.5	-6.0
	12	-7.6	-6.9	-6.7	-4.3	-4.1	-3.6	-4.3	-4.8
	7	-5.1	-6.8	-2.8	-3.4	-1.8	-2.7	-4.7	-4.3
	2	-2.7	-2.7	-2.5	-3.2	-1.7	-2.0	-2.6	-3.2
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.1	0.2	0.0	0.6	-0.2	-1.9	-1.4	-2.4
	27	0.2	-1.5	0.2	1.4	-1.1	-0.3	-0.6	-1.8
	22	1.1	0.0	-0.4	-0.2	-0.5	-0.9	-2.1	-2.5
	17	-0.3	-0.7	-1.8	-3.1	-0.9	-1.2	-2.5	-3.4
	12	-0.6	-1.4	-2.4	-4.1	-3.4	-1.1	-1.9	-3.8
	7	-1.3	-0.4	-0.3	-2.9	-5.0	-1.5	-0.5	-0.1
	2	0.8	1.3	1.4	1.0	-0.1	0.7	3.8	4.5
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	105.	71.	84.	75.	75.	72.	65.	58.
	27	84.	62.	55.	57.	63.	46.	42.	53.
	22	58.	52.	65.	47.	55.	56.	62.	73.
	17	47.	57.	73.	75.	51.	47.	51.	62.
	12	63.	63.	64.	62.	47.	23.	43.	58.
	7	43.	68.	27.	33.	29.	30.	53.	45.
	2	13.	20.	14.	24.	17.	17.	43.	54.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	45.	67.	90.	53.	14.	37.	45.	47.
	27	12.	2.	-25.	0.	-51.	-29.	-39.	-25.
	22	-53.	-53.	-90.	-78.	-80.	-98.	-130.	-153.
	17	-91.	-104.	-133.	-123.	-95.	-88.	-90.	-112.
	12	-130.	-125.	-133.	-110.	-60.	-27.	-69.	-108.
	7	-75.	-150.	-47.	-55.	-18.	-33.	-109.	-74.
	2	-17.	-20.	-12.	-12.	-17.	-19.	-51.	-92.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	10.	15.	15.	26.	-10.	-70.	-28.	-22.
	27	3.	-28.	21.	43.	-31.	-19.	-4.	-50.
	22	30.	-15.	-31.	-10.	-15.	-19.	-32.	-78.
	17	-5.	-20.	-49.	-73.	-20.	-19.	-37.	-74.
	12	-3.	-33.	-46.	-69.	-40.	-14.	-49.	-83.
	7	-26.	-26.	-10.	-25.	-19.	-20.	-26.	-22.
	2	10.	15.	15.	15.	10.	10.	56.	56.

DECEMBER 1963

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	7.0	7.6	5.7	4.6	3.3	1.9	0.0	-0.3
	27	4.9	4.2	4.2	3.0	0.2	-1.0	-1.8	-1.7
	22	-0.6	0.6	-0.3	-1.7	-4.1	-5.9	-4.9	-2.8
	17	-3.6	-3.2	-4.4	-4.0	-5.4	-5.4	-5.5	-5.5
	12	-4.8	-6.7	-6.7	-6.6	-7.1	-6.7	-6.3	-5.3
	7	-6.3	-7.3	-6.6	-7.2	-8.3	-8.7	-7.3	-5.2
	2	-4.6	-4.5	-4.7	-6.0	-6.1	-6.2	-5.7	-4.5
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.3	-1.3	0.8	3.2	5.0	4.3	3.3	1.8
	27	0.0	-1.1	0.3	3.3	4.0	2.6	1.4	0.2
	22	-2.2	-1.4	0.9	2.5	1.8	-0.3	-1.3	-3.4
	17	-2.7	-0.8	-0.8	-0.8	-0.3	-0.7	-1.7	-3.2
	12	-3.4	-1.4	-1.8	-1.8	-3.4	-2.3	-3.0	-5.3
	7	-2.3	-2.3	-3.7	-3.6	-3.1	-3.6	-5.1	-4.3
	2	-0.2	0.3	0.6	1.0	1.7	2.9	2.0	-0.1
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	126.	131.	123.	112.	113.	74.	56.	52.
	27	93.	76.	90.	78.	74.	56.	42.	43.
	22	47.	42.	40.	46.	51.	54.	43.	43.
	17	47.	40.	39.	29.	40.	52.	55.	56.
	12	51.	68.	59.	57.	71.	66.	67.	64.
	7	53.	79.	63.	73.	90.	97.	92.	50.
	2	20.	28.	39.	73.	87.	90.	74.	50.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	259.	285.	206.	158.	125.	80.	15.	0.
	27	160.	110.	150.	95.	35.	-1.	-20.	-12.
	22	10.	38.	13.	-19.	-70.	-87.	-69.	-24.
	17	-69.	-45.	-63.	-45.	-57.	-95.	-110.	-87.
	12	-70.	-125.	-123.	-106.	-118.	-125.	-135.	-97.
	7	-98.	-170.	-120.	-133.	-175.	-187.	-180.	-75.
	2	-30.	-48.	-47.	-133.	-144.	-158.	-120.	-75.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-43.	-48.	53.	125.	187.	110.	75.	55.
	27	20.	-8.	-33.	65.	87.	49.	29.	21.
	22	-53.	-25.	7.	42.	35.	-5.	-18.	-31.
	17	-47.	-23.	-15.	-11.	-14.	-18.	-27.	-48.
	12	-43.	-45.	-45.	-45.	-65.	-49.	-69.	-85.
	7	-39.	-57.	-65.	-40.	-55.	-92.	-128.	-58.
	2	-2.	0.	8.	25.	50.	85.	60.	0.

JANUARY 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	3.8	3.2	2.0	1.1	0.5	1.6	0.8	1.0
	27	-0.1	-0.7	-2.0	-4.0	-4.6	-4.3	-4.9	-3.5
	22	-5.5	-5.7	-6.3	-7.3	-7.6	-8.4	-8.3	-5.7
	17	-6.9	-6.7	-6.3	-7.0	-7.5	-7.7	-7.7	-7.3
	12	-8.0	-8.1	-8.6	-8.4	-7.6	-7.8	-7.7	-7.3
	7	-7.6	-9.1	-9.4	-8.0	-7.5	-6.6	-6.8	-6.8
	2	-6.4	-5.8	-4.9	-5.5	-6.3	-6.6	-6.0	-2.4
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	3.5	2.5	1.8	2.3	0.7	0.3	-0.8	-1.7
	27	0.8	0.7	0.2	0.9	0.7	0.0	-1.6	-2.6
	22	-3.2	-2.0	-1.2	-0.4	-0.7	-2.0	-2.3	-3.4
	17	-2.7	-2.5	-2.1	-1.7	-2.2	-3.6	-4.2	-4.4
	12	-2.9	-1.5	-2.5	-2.5	-2.6	-4.1	-4.3	-3.7
	7	-4.5	-4.5	-3.5	-2.7	-2.0	-0.6	-1.5	-3.7
	2	-3.4	-1.8	-0.1	0.4	1.3	1.7	4.4	3.2
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	94.	86.	69.	64.	72.	80.	64.	58.
	27	71.	58.	57.	72.	69.	58.	56.	56.
	22	77.	82.	83.	84.	85.	93.	81.	72.
	17	76.	76.	67.	65.	75.	91.	93.	88.
	12	100.	89.	87.	77.	77.	91.	89.	75.
	7	80.	113.	110.	78.	73.	60.	64.	81.
	2	64.	55.	34.	40.	60.	65.	52.	33.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	140.	112.	60.	30.	12.	65.	44.	30.
	27	3.	-23.	-50.	-90.	-108.	-87.	-87.	-55.
	22	-133.	-157.	-173.	-185.	-190.	-215.	-174.	-140.
	17	-162.	-156.	-128.	-115.	-145.	-185.	-197.	-180.
	12	-225.	-210.	-203.	-183.	-162.	-185.	-179.	-139.
	7	-158.	-237.	-230.	-195.	-180.	-110.	-135.	-153.
	2	-130.	-111.	-74.	-50.	-95.	-127.	-85.	-20.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	100.	78.	55.	40.	14.	-8.	-28.	-36.
	27	13.	10.	-5.	12.	11.	-3.	-30.	-40.
	22	-80.	-58.	-35.	-10.	-15.	-56.	-54.	-68.
	17	-62.	-48.	-49.	-33.	-39.	-83.	-95.	-93.
	12	-73.	-73.	-65.	-43.	-45.	-107.	-110.	-84.
	7	-97.	-133.	-104.	-50.	-30.	-15.	-28.	-102.
	2	-65.	-35.	-13.	5.	10.	20.	60.	-5.

FEBRUARY 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.0	-1.0	-1.9	-2.8	-3.7	-4.3	-4.3	-3.3
	27	-1.0	-2.8	-3.7	-5.0	-6.2	-6.2	-5.8	-5.3
	22	-4.9	-6.2	-7.2	-7.3	-7.1	-7.1	-8.2	-7.0
	17	-7.2	-7.4	-7.7	-8.3	-8.8	-7.0	-6.8	-6.8
	12	-8.5	-8.2	-6.7	-8.2	-7.8	-5.8	-6.0	-6.3
	7	-7.7	-7.8	-5.7	-6.4	-7.3	-6.9	-5.8	-4.6
	2	-6.0	-5.5	-4.2	-5.3	-5.4	-5.5	-5.1	-3.2
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	2.9	2.8	2.8	2.5	1.2	-0.5	-2.7	-4.7
	27	2.3	2.0	1.3	1.4	-0.5	-1.8	-4.0	-5.3
	22	0.1	-0.6	-1.1	-0.8	-1.7	-4.0	-6.4	-4.7
	17	-1.1	-2.3	-3.3	-3.4	-3.2	-3.6	-2.6	-2.4
	12	-3.2	-4.1	-3.9	-4.5	-4.3	-4.3	-2.6	-2.4
	7	-4.4	-4.4	-4.4	-4.6	-4.3	-4.3	-4.3	-3.0
	2	-3.9	-1.1	-0.7	0.0	0.4	-0.2	0.3	3.7
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	77.	59.	53.	50.	57.	58.	58.	70.
	27	57.	53.	63.	69.	67.	68.	87.	93.
	22	57.	61.	81.	82.	77.	98.	133.	97.
	17	68.	82.	92.	100.	106.	72.	66.	72.
	12	83.	96.	79.	98.	100.	67.	65.	74.
	7	83.	98.	64.	77.	83.	87.	70.	64.
	2	67.	48.	33.	41.	47.	63.	64.	28.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	47.	-27.	-26.	-49.	-70.	-82.	-81.	-75.
	27	-10.	-50.	-75.	-110.	-125.	-135.	-149.	-153.
	22	-98.	-120.	-176.	-177.	-153.	-182.	-250.	-204.
	17	-150.	-165.	-190.	-223.	-253.	-145.	-140.	-146.
	12	-175.	-212.	-145.	-213.	-225.	-120.	-118.	-127.
	7	-165.	-209.	-95.	-140.	-168.	-170.	-126.	-70.
	2	-130.	-92.	-40.	-58.	-71.	-105.	-101.	-27.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	68.	64.	55.	40.	25.	-20.	-63.	-120.
	27	52.	37.	29.	20.	-14.	-52.	-125.	-155.
	22	-2.	-24.	-27.	-25.	-41.	-128.	-235.	-127.
	17	-23.	-41.	-90.	-101.	-85.	-73.	-52.	-40.
	12	-62.	-98.	-99.	-120.	-100.	-87.	-59.	-42.
	7	-105.	-123.	-54.	-90.	-90.	-91.	-83.	-68.
	2	-100.	-10.	-8.	-14.	-5.	-15.	-10.	25.

MARCH 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-2.5	-2.3	-1.2	0.2	-0.4	-0.8	-0.9	0.3
	27	-4.6	-4.3	-5.0	-5.5	-5.9	-4.6	-3.4	-1.6
	22	-6.3	-5.3	-6.8	-7.6	-8.4	-8.3	-6.1	-3.0
	17	-5.7	-6.0	-6.0	-7.5	-9.1	-8.4	-7.8	-6.3
	12	-6.1	-6.6	-6.7	-8.0	-8.6	-5.8	-5.5	-6.4
	7	-4.9	-8.2	-7.2	-7.7	-8.3	-7.3	-5.3	-6.1
	2	-6.5	-5.4	-4.3	-5.6	-6.3	-6.1	-6.8	-6.5
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.5	-0.8	-1.1	-0.9	-1.0	-1.7	-2.9	-4.2
	27	-1.2	-1.0	0.3	0.1	-0.6	-1.5	-3.1	-3.6
	22	-0.8	-1.0	0.3	0.4	-0.7	-1.9	-3.3	-4.1
	17	0.8	0.0	-0.3	-0.3	-2.1	-2.3	-3.7	-4.7
	12	-1.5	-2.2	-2.2	-1.7	-1.9	-4.4	-4.2	-4.6
	7	-2.7	-3.3	-2.8	-2.8	-1.5	-6.1	-6.1	-4.3
	2	-1.5	-0.9	0.0	0.3	0.0	-1.2	0.4	0.4
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	66.	66.	74.	77.	74.	61.	68.	68.
	27	76.	68.	81.	89.	84.	77.	77.	59.
	22	69.	62.	77.	87.	102.	103.	87.	52.
	17	51.	55.	57.	74.	104.	93.	91.	87.
	12	46.	59.	58.	87.	93.	64.	57.	73.
	7	49.	89.	67.	91.	94.	93.	77.	68.
	2	47.	47.	30.	46.	52.	57.	86.	78.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-50.	-47.	-24.	23.	12.	5.	-13.	7.
	27	-112.	-85.	-113.	-140.	-150.	-109.	-95.	-37.
	22	-148.	-120.	-168.	-205.	-235.	-225.	-148.	-65.
	17	-85.	-92.	-103.	-169.	-262.	-215.	-202.	-170.
	12	-70.	-123.	-113.	-192.	-220.	-125.	-90.	-130.
	7	-77.	-209.	-133.	-177.	-165.	-210.	-122.	-110.
	2	-90.	-80.	-51.	-74.	-85.	-102.	-137.	-110.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	21.	-42.	-60.	-80.	-65.	-35.	-65.	-95.
	27	-57.	-45.	-18.	5.	-20.	-28.	-30.	-84.
	22	-32.	-30.	-2.	8.	-25.	-71.	-105.	-86.
	17	10.	2.	-15.	-18.	-56.	-68.	-95.	-110.
	12	-20.	-45.	-39.	-40.	-58.	-100.	-68.	-97.
	7	-48.	-81.	-49.	-70.	-50.	-110.	-105.	-77.
	2	-25.	-33.	-8.	0.	-10.	-25.	10.	10.

APRIL 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.9	-3.2	-3.3	-3.8	-3.9	-3.7	-4.0	-2.6
	27	-6.1	-6.0	-4.7	-7.0	-6.4	-6.4	-6.1	-4.3
	22	-6.1	-6.7	-7.3	-7.7	-8.1	-7.2	-6.9	-4.9
	17	-6.3	-6.8	-7.5	-7.8	-8.0	-6.7	-5.9	-5.7
	12	-6.4	-8.2	-8.2	-9.2	-7.8	-6.8	-6.4	-5.8
	7	-6.5	-7.4	-5.4	-7.8	-8.3	-7.0	-5.9	-6.3
	2	-5.1	-6.7	-4.6	-5.0	-6.3	-4.6	-4.2	-4.3
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-2.4	-0.3	0.9	0.6	-0.6	-1.7	-3.6	-5.6
	27	-2.4	0.0	0.4	-0.4	-0.9	-2.3	-3.8	-5.4
	22	-1.9	-1.1	0.3	-0.2	-1.7	-3.2	-4.1	-5.0
	17	-0.2	-0.2	-1.2	-2.6	-3.2	-3.5	-3.7	-3.6
	12	-1.6	-2.2	-3.3	-2.8	-2.9	-3.6	-4.2	-3.3
	7	-0.9	-1.5	-3.2	-1.5	-2.0	-3.5	-2.5	-1.3
	2	-0.9	1.0	0.7	0.9	-0.1	1.8	3.5	2.5
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	87.	73.	57.	61.	53.	48.	53.	63.
	27	73.	68.	59.	84.	63.	64.	67.	62.
	22	75.	74.	79.	77.	81.	75.	78.	66.
	17	65.	78.	82.	83.	89.	68.	67.	67.
	12	52.	83.	94.	105.	85.	67.	66.	65.
	7	56.	82.	50.	88.	87.	67.	61.	58.
	2	40.	62.	23.	45.	63.	47.	39.	30.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-36.	-77.	-64.	-88.	-81.	-73.	-75.	-50.
	27	-129.	-143.	-99.	-180.	-123.	-129.	-118.	-85.
	22	-140.	-160.	-180.	-167.	-179.	-158.	-150.	-95.
	17	-128.	-153.	-176.	-177.	-202.	-140.	-123.	-120.
	12	-82.	-187.	-218.	-255.	-182.	-125.	-103.	-83.
	7	-108.	-183.	-90.	-195.	-193.	-125.	-120.	-107.
	2	-75.	-127.	-52.	-65.	-125.	-85.	-62.	-26.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-75.	-13.	15.	15.	-10.	-28.	-65.	-116.
	27	-42.	7.	20.	3.	-18.	-43.	-72.	-90.
	22	-57.	-22.	-3.	-8.	-40.	-72.	-90.	-90.
	17	-30.	-37.	-40.	-65.	-74.	-71.	-77.	-77.
	12	-33.	-53.	-80.	-77.	-68.	-68.	-68.	-61.
	7	-13.	-52.	-50.	-55.	-55.	-82.	-56.	-32.
	2	-21.	15.	0.	10.	-45.	15.	70.	25.

MAY 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-6.2	-4.6	-3.8	-3.7	-2.8	-0.7	-0.8	0.0
	27	-6.4	-6.4	-6.5	-6.4	-4.6	-3.9	-3.7	-2.3
	22	-7.0	-7.5	-7.6	-8.0	-7.3	-6.6	-5.0	-4.8
	17	-5.8	-6.7	-7.1	-8.5	-7.7	-7.0	-7.1	-7.6
	12	-6.3	-6.6	-8.3	-8.5	-6.3	-5.5	-6.8	-8.7
	7	-4.7	-6.2	-5.1	-6.1	-4.5	-3.7	-2.8	-4.2
	2	-4.3	-4.0	-3.8	-4.4	-3.6	-3.7	-4.7	-5.8
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	2.1	0.8	-0.5	-2.0	-2.9	-2.3	-2.7	-3.6
	27	1.6	0.4	-0.9	-1.6	-2.3	-2.5	-2.9	-3.6
	22	1.4	0.1	-1.2	-1.6	-2.1	-2.7	-4.3	-4.7
	17	1.0	0.0	-1.7	-3.1	-2.8	-2.7	-3.2	-4.6
	12	-1.1	-1.1	-2.4	-3.3	-2.6	-4.0	-4.9	-6.3
	7	-0.4	-1.2	-0.7	-0.9	0.0	-2.1	-2.4	-0.5
	2	1.4	1.5	1.6	2.5	3.2	1.9	1.0	2.3
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	79.	65.	58.	57.	57.	55.	58.	62.
	27	74.	68.	62.	68.	63.	59.	57.	55.
	22	76.	76.	76.	77.	83.	72.	57.	51.
	17	57.	57.	70.	88.	75.	76.	85.	90.
	12	62.	59.	82.	90.	65.	62.	84.	125.
	7	34.	52.	30.	53.	43.	38.	47.	63.
	2	41.	28.	29.	30.	24.	31.	35.	39.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-150.	-90.	-72.	-65.	-29.	23.	-7.	10.
	27	-127.	-134.	-118.	-134.	-100.	-88.	-70.	-48.
	22	-135.	-157.	-177.	-180.	-187.	-141.	-85.	-75.
	17	-95.	-110.	-152.	-195.	-147.	-152.	-165.	-191.
	12	-126.	-122.	-189.	-197.	-111.	-96.	-156.	-270.
	7	-37.	-104.	-66.	-95.	-65.	-52.	-47.	-100.
	2	-54.	-29.	-33.	-74.	-52.	-45.	-68.	-60.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	45.	27.	-3.	-29.	-53.	-18.	-41.	-73.
	27	46.	17.	-11.	-29.	-40.	-40.	-54.	-62.
	22	29.	0.	-21.	-41.	-48.	-49.	-70.	-70.
	17	12.	-5.	-37.	-60.	-55.	-65.	-85.	-113.
	12	-10.	-29.	-60.	-85.	-65.	-85.	-132.	-198.
	7	-1.	-25.	-12.	-21.	-22.	-41.	-55.	-40.
	2	8.	8.	14.	30.	30.	8.	3.	24.

JUNE 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	2.0	1.2	0.8	0.4	0.2	0.2	0.1	0.3
	27	-1.2	-1.6	-0.4	-2.7	-4.5	-3.9	-3.3	-2.1
	22	-5.3	-6.1	-6.0	-6.3	-6.3	-6.2	-6.4	-4.3
	17	-6.2	-7.0	-7.3	-6.4	-6.1	-5.7	-6.3	-5.3
	12	-5.5	-8.1	-7.7	-7.0	-6.7	-5.6	-5.3	-4.9
	7	-4.7	-6.3	-6.3	-4.9	-4.6	-2.9	-2.5	-3.3
	2	-4.4	-4.9	-5.7	-5.3	-3.9	-4.3	-4.3	-5.4
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.6	2.5	2.0	1.7	0.8	-0.3	-1.7	-3.6
	27	1.5	0.9	0.0	0.5	-0.5	-1.3	-2.4	-3.3
	22	0.6	-0.3	-0.9	-0.8	-1.5	-1.7	-2.3	-3.4
	17	-0.2	-0.9	-1.3	-2.3	-2.8	-2.9	-3.3	-3.6
	12	-2.5	-3.4	-3.2	-3.9	-3.5	-3.1	-3.3	-3.4
	7	1.5	-1.8	-2.1	0.5	0.3	2.0	-0.3	-0.2
	2	1.8	0.9	0.7	3.1	3.3	4.2	4.1	3.3
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	49.	55.	46.	38.	47.	56.	54.	52.
	27	49.	47.	55.	53.	55.	52.	46.	44.
	22	57.	62.	67.	65.	64.	64.	62.	47.
	17	51.	64.	74.	57.	63.	53.	64.	53.
	12	48.	93.	82.	72.	74.	57.	54.	57.
	7	47.	52.	56.	38.	41.	29.	18.	34.
	2	35.	31.	26.	52.	38.	46.	53.	47.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	60.	43.	24.	25.	8.	24.	1.	-5.
	27	-22.	-32.	-21.	-66.	-85.	-75.	-58.	-42.
	22	-104.	-127.	-137.	-135.	-128.	-117.	-133.	-71.
	17	-85.	-129.	-155.	-117.	-104.	-90.	-118.	-87.
	12	-55.	-183.	-183.	-140.	-148.	-103.	-90.	-87.
	7	-65.	-97.	-102.	-65.	-54.	-25.	-22.	-42.
	2	-42.	-40.	-37.	-83.	-40.	-60.	-65.	-70.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	25.	62.	45.	22.	18.	9.	-10.	-66.
	27	45.	22.	5.	-7.	-16.	-25.	-43.	-40.
	22	-1.	-12.	-30.	-23.	-33.	-35.	-45.	-41.
	17	-1.	-24.	-30.	-42.	-58.	-52.	-62.	-62.
	12	-27.	-95.	-80.	-75.	-80.	-67.	-52.	-62.
	7	21.	-32.	-46.	4.	-5.	8.	0.	-8.
	2	20.	5.	0.	47.	29.	50.	75.	40.

JULY 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-4.6	-5.2	-4.6	-2.6	-2.2	-1.7	-1.3	-1.4
	27	-6.0	-6.3	-5.9	-6.1	-6.0	-5.2	-4.6	-3.6
	22	-7.1	-7.8	-7.4	-7.6	-6.9	-6.3	-5.6	-4.7
	17	-6.3	-7.2	-7.0	-6.3	-5.3	-4.6	-5.0	-5.0
	12	-5.2	-8.2	-7.0	-6.2	-4.5	-3.3	-1.3	-0.3
	7	-5.0	-5.7	-1.9	-3.6	-3.0	-2.1	-0.2	-0.3
	2	-4.7	-5.0	-2.9	-3.7	-2.7	-2.4	-2.2	-2.1
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.2	-1.3	-1.7	-2.4	-3.1	-2.7	-2.8	-4.3
	27	-0.6	-1.3	-1.9	-2.9	-2.6	-2.7	-3.7	-5.4
	22	-1.2	-2.2	-2.5	-2.5	-3.4	-4.3	-5.2	-7.3
	17	-1.6	-1.9	-2.5	-3.2	-3.1	-1.6	-3.2	-4.7
	12	-1.5	-4.4	-2.0	-1.9	-2.3	-3.1	-0.9	-2.0
	7	-0.2	0.4	2.2	2.5	3.1	2.3	3.1	1.0
	2	4.3	1.9	2.1	4.4	3.4	2.0	2.7	3.8
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	42.	56.	57.	44.	42.	41.	30.	43.
	27	49.	56.	57.	68.	56.	50.	53.	65.
	22	65.	75.	74.	73.	72.	63.	84.	105.
	17	54.	64.	76.	57.	55.	38.	52.	64.
	12	32.	103.	80.	53.	44.	34.	27.	37.
	7	36.	68.	27.	35.	33.	34.	23.	16.
	2	50.	45.	17.	47.	11.	20.	31.	26.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-70.	-112.	-97.	-50.	-34.	-24.	-18.	-27.
	27	-87.	-98.	-105.	-137.	-98.	-82.	-74.	-63.
	22	-130.	-170.	-162.	-153.	-135.	-118.	-120.	-92.
	17	-107.	-140.	-155.	-115.	-92.	-72.	-94.	-94.
	12	-58.	-206.	-177.	-95.	-72.	-45.	-25.	-17.
	7	-55.	-126.	-27.	-40.	-39.	-23.	-12.	-2.
	2	-51.	-76.	-17.	-53.	-13.	-25.	-30.	-18.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	3.	-28.	-33.	-45.	-47.	-50.	-35.	-62.
	27	-15.	-23.	-35.	-60.	-46.	-40.	-62.	-120.
	22	-32.	-49.	-54.	-56.	-68.	-76.	-119.	-220.
	17	-18.	-48.	-62.	-47.	-56.	-22.	-56.	-89.
	12	-27.	-125.	-62.	-27.	-28.	-28.	-20.	-40.
	7	-8.	-9.	13.	32.	35.	32.	26.	6.
	2	56.	25.	23.	75.	15.	32.	35.	32.

AUGUST 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-3.0	-3.4	-3.7	-3.7	-4.0	-3.1	-2.2	-1.3
	27	-6.1	-5.6	-6.2	-5.8	-4.8	-3.6	-2.6	-2.9
	22	-7.7	-7.0	-6.8	-6.6	-6.3	-6.0	-4.5	-4.0
	17	-6.7	-6.6	-6.1	-7.3	-6.2	-5.5	-4.7	-3.7
	12	-5.4	-4.5	-5.6	-4.9	-5.4	-4.6	-2.2	-1.9
	7	-4.9	-2.7	-4.2	-4.3	-4.6	-3.0	-1.6	0.9
	2	-5.6	-4.9	-4.5	-3.7	-5.4	-6.3	-5.8	-4.7
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.3	0.3	-0.4	-1.1	-2.1	-2.4	-2.8	-3.1
	27	0.3	-0.3	-1.3	-1.5	-1.6	-2.1	-2.6	-2.5
	22	-0.9	-1.2	-1.2	-1.1	-2.3	-3.1	-3.3	-2.9
	17	-0.5	-1.0	-2.0	-2.2	-3.4	-2.7	-3.3	-3.3
	12	-0.5	-1.0	-2.6	-3.1	-0.7	-2.1	-1.6	0.5
	7	2.3	2.0	1.6	2.7	4.0	3.2	5.3	4.3
	2	1.9	2.5	4.5	6.5	7.0	6.2	4.5	4.2
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	43.	40.	42.	44.	44.	42.	35.	35.
	27	57.	55.	55.	50.	37.	29.	26.	26.
	22	69.	65.	63.	56.	53.	55.	39.	37.
	17	54.	54.	52.	65.	60.	45.	47.	50.
	12	44.	37.	50.	47.	55.	37.	26.	43.
	7	43.	31.	38.	53.	56.	34.	48.	42.
	2	46.	41.	42.	78.	93.	94.	69.	60.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-74.	-72.	-75.	-72.	-62.	-53.	-33.	-15.
	27	-112.	-99.	-105.	-87.	-63.	-45.	-35.	-30.
	22	-145.	-132.	-123.	-108.	-98.	-103.	-49.	-46.
	17	-101.	-103.	-95.	-128.	-100.	-87.	-80.	-71.
	12	-55.	-47.	-80.	-74.	-90.	-72.	-43.	-33.
	7	-58.	-40.	-48.	-78.	-80.	-37.	-27.	0.
	2	-80.	-65.	-62.	-85.	-143.	-170.	-116.	-87.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	5.	-3.	-12.	-22.	-30.	-35.	-35.	-40.
	27	4.	0.	-20.	-28.	-19.	-21.	-20.	-32.
	22	-18.	-27.	-21.	-15.	-39.	-56.	-35.	-28.
	17	-6.	-18.	-30.	-37.	-62.	-40.	-38.	-51.
	12	3.	-16.	-30.	-32.	-25.	-24.	-5.	-5.
	7	38.	20.	12.	50.	72.	42.	81.	58.
	2	28.	20.	24.	165.	165.	150.	91.	70.

SEPTEMBER 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-2.1	-1.7	-2.6	-3.2	-4.4	-4.5	-4.1	-2.8
	27	-4.5	-4.6	-4.7	-6.1	-6.7	-6.1	-5.2	-4.5
	22	-6.0	-6.2	-7.1	-7.3	-7.2	-6.6	-5.4	-4.7
	17	-5.0	-6.0	-6.6	-7.3	-7.5	-7.2	-5.3	-4.5
	12	-4.3	-5.1	-5.4	-5.2	-6.4	-5.5	-3.3	-1.8
	7	-3.7	-5.1	-4.3	-3.2	-2.5	-2.6	-1.7	-0.7
	2	-4.2	-3.8	-4.4	-4.4	-6.0	-6.0	-6.0	-6.0
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-0.6	0.4	1.4	1.2	-0.9	-2.0	-3.7	-5.6
	27	-1.6	0.2	1.0	-0.3	-1.3	-2.3	-3.3	-4.3
	22	-1.0	-0.6	-1.0	-1.1	-2.2	-2.6	-3.4	-2.6
	17	-0.7	-0.2	-1.5	-3.2	-3.4	-3.5	-3.4	-3.6
	12	-1.2	-1.2	0.2	-2.4	-3.1	-1.3	-1.2	-1.1
	7	0.4	1.5	3.1	2.0	1.6	4.3	4.0	3.2
	2	0.7	1.4	2.3	4.8	3.4	4.7	5.7	6.5
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	43.	37.	32.	35.	38.	43.	53.	64.
	27	47.	47.	44.	51.	57.	53.	53.	60.
	22	55.	63.	68.	68.	70.	57.	53.	44.
	17	40.	61.	67.	69.	77.	75.	47.	54.
	12	30.	44.	49.	49.	76.	66.	36.	39.
	7	28.	55.	38.	39.	42.	43.	47.	47.
	2	25.	26.	31.	54.	58.	74.	85.	88.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-31.	-21.	-27.	-40.	-56.	-66.	-73.	-63.
	27	-66.	-73.	-65.	-95.	-122.	-101.	-87.	-81.
	22	-113.	-122.	-130.	-139.	-147.	-109.	-90.	-85.
	17	-60.	-110.	-137.	-153.	-162.	-153.	-95.	-75.
	12	-59.	-70.	-87.	-85.	-162.	-152.	-85.	-28.
	7	-40.	-85.	-51.	-24.	-15.	-50.	-32.	20.
	2	-37.	-30.	-40.	-60.	-89.	-130.	-149.	-149.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-30.	-5.	12.	20.	-10.	-33.	-67.	-117.
	27	-30.	-4.	6.	-3.	-23.	-38.	-60.	-88.
	22	-30.	-20.	-28.	-23.	-42.	-50.	-60.	-30.
	17	-2.	3.	-15.	-58.	-68.	-62.	-44.	-47.
	12	-18.	-25.	-15.	-43.	-80.	-40.	-7.	6.
	7	3.	30.	24.	35.	30.	69.	70.	56.
	2	7.	10.	24.	85.	73.	90.	133.	174.

OCTOBER 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-0.9	0.7	1.8	2.3	2.1	1.7	0.5	0.7
	27	-6.7	-5.2	-3.6	-1.8	-2.2	-2.0	-1.5	-0.9
	22	-8.0	-7.1	-5.9	-6.2	-6.2	-5.9	-5.1	-3.7
	17	-6.8	-7.4	-6.3	-7.3	-7.7	-5.8	-5.6	-5.0
	12	-6.1	-7.0	-5.6	-5.6	-5.8	-5.6	-4.3	-4.2
	7	-2.7	-4.4	-3.9	-3.9	-3.4	-2.4	-2.5	-3.2
	2	-4.5	-5.7	-5.0	-2.7	-2.8	-4.0	-3.7	-3.3
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-2.0	-2.6	-3.1	-2.6	-2.1	-1.1	-0.3	-1.4
	27	-1.5	-3.2	-3.3	-2.8	-1.6	-0.8	-1.2	-2.4
	22	-2.0	-2.5	-2.5	-2.3	-1.8	-1.3	-1.3	-2.3
	17	-1.3	-1.9	-1.8	-2.3	-2.9	-2.3	-4.1	-3.5
	12	-1.7	-0.7	-1.1	-0.9	-0.9	-1.1	-0.9	-2.2
	7	0.4	0.9	0.3	0.7	0.4	2.0	2.2	0.6
	2	0.8	2.3	3.6	4.3	1.4	1.6	4.3	1.7
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	68.	73.	77.	81.	77.	80.	57.	45.
	27	96.	80.	74.	67.	57.	48.	43.	41.
	22	92.	82.	73.	70.	76.	70.	53.	39.
	17	63.	67.	58.	80.	75.	57.	54.	50.
	12	51.	61.	49.	47.	48.	45.	36.	41.
	7	24.	37.	36.	40.	41.	27.	26.	32.
	2	34.	42.	50.	51.	48.	47.	40.	14.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-24.	18.	50.	85.	73.	53.	23.	21.
	27	-215.	-140.	-82.	-42.	-30.	-27.	-20.	2.
	22	-195.	-177.	-139.	-125.	-129.	-142.	-98.	-37.
	17	-123.	-143.	-120.	-170.	-178.	-104.	-82.	-76.
	12	-87.	-127.	-91.	-83.	-92.	-76.	-43.	-48.
	7	-31.	-62.	-58.	-44.	-46.	-25.	-37.	-31.
	2	-53.	-70.	-72.	-56.	-85.	-75.	-39.	-18.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-75.	-95.	-94.	-70.	-53.	-16.	15.	-22.
	27	-50.	-75.	-85.	-58.	-22.	-15.	-15.	-35.
	22	-68.	-58.	-55.	-55.	-55.	-37.	-22.	-25.
	17	-38.	-37.	-43.	-56.	-56.	-49.	-62.	-50.
	12	-23.	-12.	-31.	-18.	-28.	-25.	-15.	-28.
	7	12.	10.	-2.	12.	6.	10.	11.	-7.
	2	-8.	29.	50.	62.	23.	20.	49.	20.

NOVEMBER 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.1	-1.1	-1.3	-0.6	-0.7	0.1	0.5	1.2
	27	-0.8	-1.4	-2.7	-3.3	-4.2	-3.7	-2.5	-1.2
	22	-4.3	-5.2	-4.8	-5.7	-5.7	-5.4	-5.3	-5.5
	17	-5.8	-6.0	-7.6	-8.3	-6.3	-6.0	-7.2	-6.4
	12	-8.8	-9.4	-8.2	-8.4	-7.3	-6.7	-6.2	-5.5
	7	-8.4	-7.8	-6.9	-5.4	-5.6	-6.3	-6.5	-6.7
	2	-7.3	-6.2	-5.0	-6.2	-5.0	-5.7	-4.6	-5.5
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	2.9	2.5	0.6	-0.3	-0.4	-0.7	-1.6	-2.3
	27	0.7	1.3	1.4	1.4	0.9	0.0	-2.3	-2.7
	22	-0.1	-0.3	0.1	0.0	-0.5	-0.8	-0.9	-1.9
	17	-0.8	-1.5	-2.6	-1.1	-1.3	-0.7	-1.7	-2.6
	12	-1.7	-4.7	-3.3	-2.4	-1.2	-1.6	-2.0	-2.3
	7	-0.6	-0.7	-0.4	0.5	0.5	0.1	0.9	0.7
	2	0.3	0.5	1.4	3.7	3.7	5.8	4.3	0.6
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	123.	101.	76.	72.	79.	83.	69.	68.
	27	122.	97.	86.	79.	77.	62.	53.	54.
	22	78.	93.	85.	87.	68.	57.	46.	52.
	17	55.	72.	96.	101.	56.	48.	70.	57.
	12	101.	121.	106.	92.	72.	65.	58.	40.
	7	89.	84.	63.	46.	58.	76.	77.	77.
	2	64.	47.	27.	81.	82.	82.	46.	55.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	53.	1.	-30.	-15.	-13.	0.	18.	31.
	27	15.	-15.	-70.	-85.	-95.	-72.	-37.	-8.
	22	-121.	-175.	-143.	-163.	-142.	-102.	-83.	-83.
	17	-110.	-133.	-217.	-247.	-112.	-87.	-143.	-100.
	12	-233.	-270.	-245.	-218.	-138.	-140.	-108.	-60.
	7	-210.	-185.	-145.	-90.	-108.	-162.	-137.	-174.
	2	-149.	-101.	-52.	-150.	-128.	-112.	-57.	-83.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	85.	88.	20.	10.	0.	-28.	-55.	-75.
	27	24.	57.	50.	33.	27.	-3.	-54.	-56.
	22	-9.	-5.	-10.	-8.	-12.	-20.	-25.	-35.
	17	-45.	-26.	-80.	-42.	-22.	-24.	-35.	-42.
	12	-60.	-160.	-105.	-65.	-31.	-38.	-36.	-36.
	7	-20.	-23.	-13.	0.	-9.	-12.	-18.	-27.
	2	-3.	3.	23.	83.	78.	135.	60.	100.

DECEMBER 1964

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.5	1.9	1.0	2.3	2.7	3.7	2.0	1.8
	27	1.6	0.5	-1.7	-1.4	-1.3	-0.8	-1.9	-1.3
	22	0.7	-0.8	-3.8	-4.3	-4.7	-5.4	-6.3	-5.7
	17	-2.7	-2.8	-5.5	-6.3	-7.1	-7.5	-7.5	-7.8
	12	-4.7	-6.3	-7.1	-6.6	-7.2	-5.8	-6.6	-7.1
	7	-6.4	-7.5	-6.5	-6.3	-5.0	-4.4	-5.9	-3.6
	2	-5.7	-5.9	-3.6	-5.6	-6.2	-6.4	-5.6	-5.0
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.9	1.4	2.5	2.3	3.3	3.7	2.6	1.6
	27	2.4	3.3	2.5	3.0	2.9	3.2	1.6	0.1
	22	2.0	3.0	1.8	3.0	2.0	1.0	-0.3	-2.8
	17	0.7	0.8	0.7	0.7	0.4	-1.8	-2.7	-3.9
	12	0.0	-1.3	-1.9	-4.5	-1.8	-1.3	-3.6	-4.5
	7	-1.0	-2.0	-0.9	-0.1	1.5	-0.2	-0.3	1.2
	2	2.2	0.4	1.1	4.2	4.5	4.5	3.0	1.8
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	133.	118.	102.	91.	83.	85.	64.	56.
	27	108.	94.	76.	59.	50.	57.	48.	41.
	22	90.	91.	76.	69.	60.	54.	64.	55.
	17	49.	73.	77.	76.	74.	67.	68.	83.
	12	63.	62.	76.	67.	74.	55.	68.	82.
	7	64.	70.	55.	56.	56.	57.	85.	50.
	2	54.	50.	25.	58.	67.	75.	62.	44.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	27.	65.	31.	85.	80.	115.	54.	39.
	27	95.	40.	-28.	5.	-2.	10.	-24.	-8.
	22	50.	1.	-80.	-75.	-78.	-87.	-128.	-95.
	17	-53.	-62.	-135.	-156.	-160.	-130.	-132.	-174.
	12	-80.	-122.	-150.	-123.	-150.	-90.	-125.	-153.
	7	-105.	-145.	-105.	-105.	-88.	-97.	-150.	-70.
	2	-96.	-92.	-37.	-95.	-129.	-135.	-95.	-60.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.	54.	85.	69.	95.	111.	70.	42.
	27	85.	115.	80.	74.	62.	75.	32.	12.
	22	50.	81.	52.	73.	32.	4.	-13.	-40.
	17	12.	35.	5.	-2.	-4.	-33.	-45.	-88.
	12	-13.	-28.	-33.	-68.	-45.	-20.	-60.	-110.
	7	-23.	-48.	-23.	-8.	25.	-26.	-30.	5.
	2	39.	-3.	13.	60.	78.	79.	48.	23.

JANUARY 1965

		LONGITUDE WEST							
	W(X)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	3.9	2.4	1.1	2.5	1.5	0.5	-0.4	-0.1
	27	3.0	1.8	1.3	1.8	-1.0	-2.3	-2.4	-2.7
	22	0.5	-0.4	-1.7	-1.7	-2.8	-2.8	-5.4	-6.3
	17	-3.2	-5.0	-4.5	-5.0	-5.1	-4.4	-6.7	-6.2
	12	-7.5	-7.2	-6.6	-7.3	-5.8	-7.2	-5.7	-5.3
	7	-6.4	-6.3	-4.9	-5.7	-7.1	-7.3	-4.4	-5.7
	2	-5.4	-4.8	-4.3	-6.3	-7.2	-7.1	-6.1	-7.3
	W(Y)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.9	-0.6	-0.1	1.2	3.5	3.9	2.4	0.5
	27	-0.8	-0.5	0.8	2.6	4.5	3.7	2.0	-0.3
	22	-2.3	-1.9	-0.3	1.7	2.0	1.8	-0.2	-2.1
	17	-2.0	0.4	1.7	1.1	-1.8	-0.4	-2.3	-4.2
	12	-3.8	-1.3	0.4	-0.4	-2.8	-2.4	-4.6	-6.2
	7	-3.1	-0.3	1.3	-1.3	-2.2	-1.4	-1.8	-2.3
	2	-0.6	0.4	1.7	1.3	0.9	2.0	2.5	1.4
	WSQ	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	85.	90.	115.	103.	82.	88.	69.	49.
	27	86.	103.	89.	94.	86.	72.	47.	36.
	22	67.	81.	82.	76.	61.	61.	70.	63.
	17	42.	64.	57.	49.	50.	48.	77.	77.
	12	82.	73.	62.	75.	57.	77.	72.	95.
	7	65.	63.	36.	43.	68.	83.	54.	67.
	2	44.	43.	25.	44.	56.	63.	52.	63.
	T(X)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	108.	70.	51.	70.	45.	3.	-8.	25.
	27	108.	78.	90.	76.	-27.	-77.	-50.	-30.
	22	30.	-10.	-30.	-20.	-60.	-83.	-140.	-130.
	17	-47.	-108.	-85.	-85.	-76.	-70.	-148.	-145.
	12	-133.	-153.	-133.	-180.	-101.	-175.	-120.	-122.
	7	-124.	-112.	-45.	-93.	-115.	-182.	-81.	-125.
	2	-78.	-52.	-37.	-78.	-150.	-180.	-103.	-149.
	T(Y)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	30.	-22.	-51.	-22.	90.	110.	50.	2.
	27	-30.	-22.	23.	58.	110.	103.	35.	0.
	22	-48.	-70.	-45.	4.	47.	37.	-8.	-39.
	17	-22.	10.	26.	3.	-40.	-7.	-39.	-97.
	12	-72.	-38.	2.	-12.	-65.	-47.	-91.	-165.
	7	-62.	-15.	10.	-20.	-37.	-31.	-33.	-64.
	2	-12.	5.	19.	20.	10.	40.	53.	7.

FEBRUARY 1965

		LONGITUDE WEST							
	W(X)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.1	-1.2	-2.4	-2.5	-4.6	-3.8	-3.3	-3.2
	27	-2.6	-2.5	-1.7	-3.3	-3.6	-4.2	-5.0	-4.5
	22	-3.9	-3.7	-2.4	-0.4	-1.7	-4.4	-8.0	-5.6
	17	-6.4	-5.7	-5.0	-3.3	-2.5	-5.1	-6.7	-7.8
	12	-7.1	-6.0	-6.7	-6.1	-6.5	-6.6	-5.8	-7.3
	7	-8.3	-8.7	-8.6	-7.3	-6.8	-6.5	-6.5	-5.5
	2	-7.3	-5.2	-5.0	-6.7	-6.7	-5.6	-4.0	-1.7
	W(Y)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-0.5	-2.7	-4.5	-4.3	-1.3	0.3	2.4	0.2
	27	-2.7	-4.5	-4.6	-2.4	0.3	2.4	1.3	-1.4
	22	-4.2	-5.3	-5.0	-4.0	-0.5	2.5	-0.3	-1.5
	17	-3.7	-4.5	-3.5	-4.6	-2.9	0.2	-0.8	-1.5
	12	-4.9	-6.3	-5.1	-3.9	-5.0	-3.5	-3.7	-3.5
	7	-4.4	-4.2	-2.1	-0.4	-0.8	-0.8	-2.2	-2.3
	2	-1.4	-0.3	0.6	2.3	2.2	1.3	2.5	0.4
	WSQ	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	90.	77.	97.	122.	143.	98.	82.	64.
	27	60.	78.	81.	113.	121.	99.	77.	62.
	22	64.	75.	76.	97.	76.	97.	83.	57.
	17	72.	69.	72.	64.	46.	58.	59.	82.
	12	89.	88.	100.	80.	95.	68.	53.	78.
	7	98.	137.	88.	73.	76.	71.	63.	54.
	2	73.	44.	35.	71.	60.	40.	22.	10.
	T(X)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	15.	7.	-47.	-74.	-150.	-76.	-78.	-48.
	27	-33.	-65.	-53.	-103.	-108.	-112.	-120.	-83.
	22	-78.	-85.	-39.	-5.	-33.	-110.	-193.	-96.
	17	-127.	-131.	-120.	-85.	-60.	-110.	-113.	-190.
	12	-150.	-151.	-203.	-150.	-170.	-140.	-86.	-158.
	7	-210.	-260.	-175.	-159.	-145.	-116.	-126.	-108.
	2	-154.	-72.	-55.	-143.	-132.	-66.	-25.	-1.
	T(Y)	167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.	-87.	-165.	-177.	-65.	-15.	55.	3.
	27	-81.	-140.	-130.	-125.	-3.	70.	27.	-27.
	22	-107.	-127.	-118.	-130.	12.	75.	-22.	-49.
	17	-70.	-85.	-73.	-112.	-36.	12.	0.	-37.
	12	-113.	-128.	-130.	-112.	-136.	-58.	-45.	-60.
	7	-122.	-141.	-60.	-15.	-30.	-55.	-80.	-57.
	2	-35.	-10.	3.	51.	41.	10.	6.	12.

MARCH 1965

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	3.4	2.8	1.8	-0.9	-2.4	-2.6	-1.8	0.4
	27	1.4	0.5	-0.4	-1.4	-2.6	-3.4	-2.8	-2.6
	22	-2.0	-1.2	-1.6	-2.3	-3.3	-4.2	-4.3	-3.7
	17	-4.0	-3.4	-3.7	-3.5	-4.8	-5.1	-5.1	-5.4
	12	-5.8	-5.1	-5.8	-5.8	-7.7	-6.7	-6.4	-6.4
	7	-4.8	-6.2	-9.1	-8.2	-9.6	-8.6	-7.7	-6.5
	2	-3.7	-6.6	-4.4	-6.1	-6.8	-6.3	-5.4	-4.5
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-0.2	1.0	-1.7	-0.1	1.4	0.2	-1.2	-3.1
	27	-0.7	0.6	-2.7	-1.0	1.6	0.7	-0.2	-1.4
	22	-1.3	-1.2	-1.4	-0.6	0.7	2.2	-0.6	-3.3
	17	-1.6	-2.3	-2.2	-1.8	0.2	0.3	-2.0	-3.2
	12	-1.1	-1.8	-2.6	-2.4	-1.4	-2.4	-4.7	-5.0
	7	-1.8	-4.4	-3.5	-3.2	-1.8	-3.3	-5.2	-7.1
	2	-1.0	-2.3	-1.0	-1.6	-1.0	-2.5	-4.2	-5.3
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	93.	100.	111.	80.	70.	57.	67.	60.
	27	72.	72.	73.	70.	77.	73.	63.	46.
	22	54.	48.	49.	55.	63.	63.	54.	46.
	17	43.	46.	36.	43.	44.	44.	40.	60.
	12	32.	38.	51.	54.	80.	57.	68.	83.
	7	49.	77.	105.	76.	95.	86.	97.	109.
	2	30.	51.	41.	54.	60.	53.	56.	66.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	92.	70.	36.	-27.	-42.	-40.	-13.	50.
	27	50.	12.	-11.	-45.	-68.	-80.	-50.	-31.
	22	-32.	-20.	-25.	-52.	-73.	-105.	-79.	-47.
	17	-70.	-90.	-52.	-50.	-87.	-75.	-73.	-100.
	12	-43.	-68.	-85.	-92.	-185.	-96.	-122.	-160.
	7	-60.	-145.	-242.	-164.	-248.	-170.	-193.	-220.
	2	-37.	-100.	-75.	-90.	-115.	-104.	-95.	-126.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	22.	40.	-42.	0.	42.	-9.	-40.	-77.
	27	0.	21.	-70.	-35.	15.	20.	-10.	-27.
	22	-35.	-27.	-27.	-12.	10.	51.	-10.	-40.
	17	-35.	-52.	-40.	-30.	5.	14.	-42.	-66.
	12	-15.	-15.	-37.	-45.	-42.	-42.	-102.	-125.
	7	-56.	-111.	-95.	-65.	-42.	-46.	-127.	-199.
	2	-23.	-50.	-25.	-23.	-15.	-31.	-88.	-160.

APRIL 1965

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-2.4	-2.7	-3.0	-3.0	-1.6	-0.7	0.1	1.6
	27	-2.9	-4.4	-4.4	-5.2	-4.0	-2.3	-1.8	-0.4
	22	-4.0	-4.2	-4.8	-5.7	-4.8	-3.1	-3.4	-2.2
	17	-3.9	-5.0	-4.3	-4.8	-7.3	-6.6	-6.4	-5.2
	12	-6.4	-7.8	-7.2	-6.3	-7.7	-6.6	-5.6	-7.2
	7	-6.3	-7.9	-6.1	-6.4	-6.1	-5.5	-4.0	0.3
	2	-6.3	-5.7	-4.1	-5.3	-5.7	-5.3	-3.1	-0.1
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	0.6	1.3	0.3	-0.8	-1.6	-2.3	-2.4	-3.1
	27	-1.1	0.4	0.6	0.1	-0.3	-0.7	-1.7	-3.5
	22	-2.1	-0.2	-0.1	0.4	0.1	0.6	-1.4	-3.3
	17	-1.6	-1.0	-0.6	-0.2	-2.2	-1.6	-2.7	-3.3
	12	-3.1	-3.3	-0.9	-1.6	-2.1	-3.3	-5.4	-4.2
	7	-4.4	-3.1	-1.6	-2.3	-3.8	-4.3	-4.8	-1.6
	2	-2.0	-1.4	-0.7	-1.6	-2.2	-2.0	-0.9	0.2
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	73.	62.	67.	57.	56.	62.	66.	72.
	27	85.	76.	77.	79.	63.	54.	58.	63.
	22	71.	63.	68.	75.	58.	45.	55.	54.
	17	42.	54.	59.	57.	77.	63.	57.	60.
	12	90.	86.	72.	57.	74.	73.	73.	92.
	7	74.	80.	47.	62.	76.	74.	70.	50.
	2	56.	42.	20.	43.	45.	46.	44.	36.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-58.	-56.	-82.	-55.	-22.	4.	17.	52.
	27	-70.	-102.	-123.	-145.	-89.	-32.	-18.	10.
	22	-103.	-110.	-127.	-131.	-93.	-48.	-60.	-35.
	17	-60.	-106.	-102.	-85.	-158.	-126.	-106.	-87.
	12	-139.	-180.	-145.	-118.	-168.	-146.	-128.	-150.
	7	-110.	-169.	-88.	-115.	-155.	-147.	-123.	-1.
	2	-90.	-74.	-25.	-81.	-101.	-100.	-64.	-3.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	4.	15.	10.	-7.	-22.	-55.	-65.	-80.
	27	-52.	10.	12.	-15.	-11.	-12.	-31.	-77.
	22	-45.	-7.	-5.	-12.	5.	15.	-52.	-99.
	17	-15.	-22.	-17.	-23.	-50.	-37.	-59.	-46.
	12	-110.	-97.	-42.	-40.	-50.	-58.	-112.	-115.
	7	-74.	-62.	-28.	-57.	-87.	-90.	-103.	-40.
	2	-28.	-25.	-4.	-21.	-32.	-40.	-35.	0.

MAY 1965

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-0.6	-0.7	-0.4	-2.1	-2.7	-2.8	-2.6	-1.3
	27	-5.1	-4.4	-4.2	-5.7	-6.2	-6.3	-6.2	-4.3
	22	-4.6	-4.8	-5.9	-6.7	-7.4	-7.4	-6.8	-6.3
	17	-4.5	-5.5	-6.6	-7.4	-6.8	-7.2	-7.1	-6.5
	12	-6.3	-7.2	-7.4	-8.3	-8.0	-6.7	-6.6	-6.2
	7	-6.9	-5.6	-6.6	-6.8	-7.4	-7.3	-7.2	-8.3
	2	-3.9	-3.8	-4.2	-5.1	-5.2	-4.9	-4.3	-3.9
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-1.8	-1.0	1.6	3.3	2.4	1.1	-1.5	-4.5
	27	-2.1	-0.9	1.3	1.6	0.9	-0.3	-2.3	-4.5
	22	-3.1	-0.4	0.7	1.2	-0.4	-1.3	-2.3	-4.1
	17	-0.8	0.1	-0.1	-1.4	-2.3	-2.4	-3.3	-3.9
	12	-2.4	-1.6	-0.5	-1.4	-2.0	-4.4	-6.1	-5.0
	7	-2.9	-3.2	-2.3	-1.6	-1.6	-2.9	-3.4	-4.0
	2	1.5	0.0	-0.9	-1.5	-0.8	-0.1	1.3	3.3
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	56.	56.	53.	50.	53.	43.	35.	43.
	27	53.	73.	56.	63.	63.	59.	53.	53.
	22	53.	49.	55.	63.	67.	65.	63.	76.
	17	33.	48.	62.	69.	66.	74.	77.	74.
	12	52.	72.	64.	83.	83.	73.	97.	75.
	7	53.	56.	51.	54.	59.	64.	71.	83.
	2	26.	24.	20.	31.	34.	36.	37.	39.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-15.	-15.	-10.	-35.	-46.	-42.	-39.	-24.
	27	-96.	-130.	-123.	-126.	-123.	-122.	-105.	-78.
	22	-80.	-78.	-103.	-135.	-140.	-135.	-124.	-165.
	17	-52.	-85.	-127.	-146.	-145.	-154.	-156.	-168.
	12	-115.	-155.	-137.	-190.	-173.	-127.	-172.	-128.
	7	-88.	-99.	-105.	-110.	-115.	-124.	-142.	-195.
	2	-25.	-37.	-32.	-42.	-51.	-60.	-50.	-30.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	-40.	-21.	27.	59.	64.	26.	-22.	-60.
	27	-40.	-24.	12.	23.	20.	-10.	-35.	-70.
	22	-59.	-14.	8.	5.	-8.	-27.	-45.	-90.
	17	-10.	3.	-5.	-35.	-55.	-45.	-72.	-78.
	12	-20.	-35.	-20.	-37.	-53.	-97.	-150.	-112.
	7	-32.	-67.	-40.	-20.	-30.	-44.	-72.	-102.
	2	11.	-12.	-12.	-15.	-10.	-7.	2.	30.

JUNE 1965

		LONGITUDE WEST							
W(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.6	0.9	-0.3	0.0	-1.4	-1.2	-1.1	-0.2
	27	-3.6	-5.1	-5.7	-6.3	-5.8	-4.7	-4.3	-2.4
	22	-5.9	-6.4	-7.2	-7.5	-7.3	-5.8	-5.7	-6.2
	17	-7.0	-6.5	-7.4	-7.8	-8.7	-7.1	-6.3	-5.8
	12	-6.5	-7.4	-8.2	-6.9	-8.7	-7.2	-5.4	-4.4
	7	-6.5	-7.8	-7.1	-6.3	-7.2	-6.8	-4.8	-1.6
	2	-2.5	-4.3	-3.8	-3.9	-4.0	-2.2	1.6	4.6
W(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	1.6	1.4	0.8	0.2	-0.4	-1.3	-3.7	-5.1
	27	1.5	0.3	-0.5	-1.2	-0.3	-1.7	-3.9	-4.9
	22	-0.7	-1.2	-0.7	-0.4	-1.4	-2.8	-5.1	-5.3
	17	-0.4	-1.7	-2.4	-2.3	-2.6	-3.2	-3.7	-3.7
	12	-2.3	-3.4	-3.0	-4.2	-3.8	-3.5	-4.5	-4.0
	7	-3.2	-4.1	-0.5	-2.3	-0.9	-2.2	-2.3	-3.0
	2	1.6	-1.2	-0.8	-0.1	0.7	1.3	2.1	3.2
WSQ		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	43.	40.	36.	31.	38.	42.	43.	44.
	27	43.	50.	62.	61.	59.	48.	49.	51.
	22	47.	55.	67.	71.	72.	62.	71.	81.
	17	62.	57.	83.	84.	87.	68.	63.	67.
	12	57.	86.	86.	80.	97.	77.	67.	60.
	7	72.	92.	66.	70.	74.	68.	71.	43.
	2	20.	35.	25.	22.	29.	29.	34.	38.
T(X)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	30.	25.	-5.	0.	-24.	-28.	-20.	-10.
	27	-50.	-88.	-120.	-130.	-110.	-78.	-65.	-50.
	22	-72.	-110.	-140.	-155.	-160.	-106.	-108.	-140.
	17	-120.	-103.	-183.	-182.	-200.	-139.	-120.	-115.
	12	-90.	-182.	-187.	-170.	-220.	-155.	-115.	-98.
	7	-152.	-200.	-90.	-140.	-162.	-142.	-106.	-39.
	2	-23.	-46.	-27.	-36.	-30.	-17.	-17.	24.
T(Y)		167	162	157	152	147	142	137	132
LATITUDE NORTH	32	20.	20.	10.	4.	-1.	-18.	-51.	-85.
	27	24.	1.	-15.	-22.	-18.	-30.	-62.	-84.
	22	-12.	-25.	-23.	-24.	-31.	-54.	-110.	-120.
	17	-6.	-30.	-60.	-55.	-58.	-56.	-79.	-85.
	12	-37.	-90.	-93.	-96.	-100.	-75.	-82.	-76.
	7	-60.	-121.	-20.	-64.	-42.	-50.	-58.	-50.
	2	14.	-10.	-10.	0.	12.	22.	22.	26.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources."

The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States -- now and in the future.

UNITED STATES
DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
WASHINGTON, D.C. 20240

OFFICIAL BUSINESS

Return this sheet to above address, if you do NOT wish to receive this material ☐, or if change of address is needed ☐ (indicate change including ZIP Code).

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR